DOCUMENT RESUME

ED 214 751 SE 035 714

AUTHOR Schwab, Judith L., Ed.
TITLE Social Sciences in Forestry. A Current Selected Bibliography [and] Cumulative Author Index for 1981. No. 56.
INSTITUTION Virginia Polytechnic Inst. and State Univ., Blacksburg. Div. of Forestry and Wildlife Resources.
SPONS AGENCY Forest Service (DOA), Washington, D.C.
PUB DATE Oct 81
NOTE 78p.

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Annotated Bibliographies; Business; Economics; *Forestry; *Forestry Occupations; History; Manufacturing; Productivity; *Social Sciences

ABSTRACT

Entries within this selected bibliography of social sciences in forestry are arranged alphabetically within subcategories of a subject-matter classification scheme. The five major categories of the system relate to social science applications of forestry at large; forestry's productive agents; forest production; manufacturing; and marketing, trade, and demand for forest output. Each entry includes the cumulative index number, subcategory code, author, title, bibliographic information and brief annotation. A subject index and cumulative author index for 1981 are also included. (DC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED214751

SOCIAL SCIENCES in FORESTRY

A CURRENT SELECTED BIBLIOGRAPHY

NO. 56 OCTOBER 1981

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Anne W. Lauby

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Cumulative Author Index for 1981

JUDITH L. SCHWAB, EDITOR

DEPARTMENT OF FORESTRY
SCHOOL OF FORESTRY & WILDLIFE RESOURCES
VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY
BLACKSBURG, VIRGINIA 24061

SE 035 714

SOCIAL SCIENCES IN FORESTRY

A Current Selected Bibliography

No. 56 October 1981

COOPERATORS ABROAD

Seppo Ervasti
Helsinki, Finland

Werner A. Kroth
Munich, West German Fed. Rep.

Benjamin Olivares P.
Valdivia, Chile

Israel Acosta Contreras
Bogota, Colombia

Nikolaos Stamou
Thessaloniki, Greece

Cho, Eung Hyouk
Daejeon, Korea

Finn Helles
Copenhagen, Denmark

E.A. Ochieng Obado
Nakuru, Kenya

J.P. Newton
United Kingdom

Chaw-Ming Chen
Taipei, Taiwan

Takuro Kishine
Kyoto, Japan

Ing Jiri Ruprich
Brno, Czechoslovakia

Christian Camous
Paris, France

George F. Taylor II
Bamako, Mali

Harold P.Sandstrom
Merritt, Canada

Ian S. Ferguson
Canberra, Australia

Gonzalo Fernandez Tomás
Madrid, Spain

Generous cooperation by the staff of the Carol M. Newman Library is acknowledged with thanks.

Judith L. Schwab
Editor

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
School of Forestry and Wildlife Resources
Department of Forestry
Blacksburg, Virginia 24061

With support from the United States Department of Agriculture, Forest Service

SOCIAL SCIENCES IN FORESTRY

Subject-Matter Classification Scheme

Note: This outline is regarded as working for the most part from the general to the specific. Material covering two or more sections of this outline is classified in the most general of these sections. Material which is classifiable in any of two or more sections is classified in the most specific of these sections. *Asterisks mark those subjects which are not represented in this issue.

I. SOCIAL SCIENCE APPLIED TO FORESTRY AT LARGE

A. General principles, scope, content, method

B. History, status, prospects of forestry in an area, society in an area (This section includes material on forest resources alone, as opposed to that on consumer or intermediate resources alone, for which see appropriate sections.)

1. General
2. United States, Canada
3. Other north-temperate nations
4. South-temperate nations
5. Nations in lower latitudes

C. Law, politics, policy, plan, program, and their administration

D. Other influences

1. Taxation

a. General
b. Property, general and special; severance; lieu payment
c. Income, inheritance, other

2. Valuation (See also IIIA5i)
*3. Insurance
4. Social interest, value system, custom, folklore, culture
5. Characteristics of the individual
*6. Public relations, other

E. Research (For research on specifc topics, see those topics.)

*F. Professional and subprofessional affairs, education, employment of foresters

G. Social and economic development (See also IB)

H. Environmental concern

II. APPLIED TO FORESTRY'S PRODUCTIVE AGENTS
(See also the individual operation or type of output in III, IV, V)

A. Labor (Some material on labor will be found in IF, IV)

*1. General, employment, demand
*2. Supply, union
3. Wage, cost hours, productivity, technology, training, return, benefit
*4. Working condition, turnover, absenteeism, safety, insurance
5. Characteristics of the worker

B. Owner, ownership, manager, entrepreneuer, holding (See also IC, IIC3)

*1. General
2. Public

a. General
b. Federal, central
c. Regional, local

3. Private

a. General
*b. Industrial
c. Nonindustrial

C. Land

*1. Context of supply, requirement, etc.
*2. Description, use trend and status, interpreted description
3. Management, use prospect and plan, planning, marketing, tenure
*4. Research method

D. Capital

1. General, investment, interest, finance
   (For investment in forest production, see IIIE; for that in manufacturing, see IVA4)
*2. Credit

III. APPLIED TO FOREST PRODUCTION (See also IIB, C)

A. Production including nontimber commodities and services

1. General, supply, multipurpose management
2. Christmas trees, greens
3. Range and livestock
*4. Naval stores, maple product
5. Recreation

   a. General
   b. Research
   *c. Decision
   d. Demand, consumer, market
   e. Parks and wilderness areas
   *f. Interpretation
   g. Aesthetic values
   h. Consumer activities such as driving, walking, camping, etc.
   i. Valuation

*6. Water, soil, watershed management, shelterbelts
7. Wildlife, hunting, fishing
8. Urban forestry

B. Production chiefly of timber

1. General, supply
*2. Soil, site, site improvement
3. Tree regeneration and improvement; plantation
4. Intermediate cutting, pruning, stand improvement
5. Harvest cutting, rotation, cutting cycle, stocking, regulation, allowable cut
   (For harvesting treated as engineering, see IVB)

C. Roads, other forest-management transportation
   (For transportation in harvesting, see IVB4; in manufacturing and marketing, VD)

D. Damage and protection

1. From fire
*2. Prescribed burning

3. From insects
*4. From other agencies
(For water damage and soil erosion, see IIIA6)

E. Decision making, planning, investment, accounting, inventorying
(For investment in general, see IID1)

IV. APPLIED TO MANUFACTURING
(For material on forestry in general, including forest land resources, see IID1)

A. The industry in general

1. Status and trend

a. General
b. United States, Canada
c. Other north-temperate nations
*d. South-temperate nations
e. Nations in lower latitudes

*2. Directory
(Includes those covering specific branches of industry.)
3. History
4. Decision making, planning, investment, accounting, inventorying
(For a specific branch of industry, see that branch, "Operation of firm"; for investment in general, see IID1)

B. Timber-harvesting industry
(Includes roundwood in general; for specific types, see IVC, "raw material." For harvesting as silviculture, see IIIB4, 5)

*1. Status and trend
*2. Operation of firm
3. Utilization of the stand or tree
(For utilization of a specific product, see the branch of industry in question.)

a. General
*b. Logging residue and its disposal

*4. Transportation (Skidding, yarding, loading, hauling to mill. For transportation in forest management, see IIIC; in manufacturing and marketing, see VD)

C. Wood-using industry

1. Lumber, allied product, pallet

a. Industry status and trend
*b. Production, consumption, stocks, other statistics
(For sawtimber, see IB, IVB; for sawlogs, see IVC1d)
*c. Operation of firm
d. Raw material

2. Pulp, paper, board

a. Industry status and trend
b. Operation of firm
c. Raw material
*d. By-products

3. Veneer, plywood, panel

a. Industry status and trend
*b. Operation of firm
*c. Raw material

*4. Bark, chips other residue
(See also IVB3 and the industry branch in question, "Operation of firm.")
*5. Furniture
*6. Particleboard, hardboard, fibreboard, flakeboard
7. Construction
8. Charcoal, fuelwood, other combustibles; energy
9. Other wood-using industry (including pole, piling, post, mine timber, railway tie)

D. Other forest industry

1. Decorative product
2. Naval stores
3. Maple product
4. Other

V. APPLIED TO MARKETING, TRADE, DEMAND FOR FOREST OUTPUT
(For marketing and demand for productive agents, see II)

A. Demand (See also IF)

1. General; history of consumption; consumption-production relationships
*2. Consumption or production prospect, goal, requirement, prediction (For material on short-term requirement, see the industry in question in IV, "Industry status and trend.")
*3. Consumer and his preference
(For material on specific forest resources, see also IIIA,B)

B. Market, marketing, trade, export, import

1. General
*2. Futures, hedging
3. Stumpage, roundwood
4. Lumber, plywood, composition board
5. Pulp, paper, paperboard

a. Product
b. Raw material

6. Other wood products
*7. Christmas trees, greens
*8. Other type of output (See also IIC3)

C. Price, value

1. General
2. Stumpage, roundwood
*3. Other type of output
*4. Price reporting

*D. Transportation (Includes transportation in manufacturing.) (For transportation in forest management, see IIIC; in harvesting see IVB4)

1469. 56 IA COMOLLI PAUL M. "Principles and Policy in Forestry Economics." The Bell Journal of Economics, Vol. 12, No. 1 (1981), pages 300-309. Market-oriented, neoclassical interpretation of the classical optimum-rotation problem in forestry economics.

1470. 56 IA DUERR WILLIAM A. "Productivity as a Forestry Theme." Journal of Forestry, Vol. 79, No. 8 (1981), pages 520-522. A theme of the forestry profession is productivity. Forestry has always addressed the productivity problem on the strength of conviction: that wood is good, that all the forest's resources are good. This conviction is justification enough for the productivity theme.

1471. 56 IB1 CAMPBELL JOHN "The World's Third Forest." The Commonwealth Forestry Review, Vol. 59, No. 4 (1980), pages 527-536. World population is expected to double by the year 2025, placing unprecedented demands on the world's resources, creating tensions between nations which risk the future of mankind. The third forest of man-made fuel-wood and industrial plantations is estimated to require a sustained annual investment of $5bn to the end of the century. The world's third forest could be the vehicle to take us forward.

1472. 56 IB1 GAMMIE J.I. World Timber to the Year 2000. E.I.U. Special Report No. 98. The Economist Intelligence Unit London. (1981), 88 pages. World resource, production and international trade, future demand forecasts, and price trends of world trade supplies.

1473. 56 IB2 BOLSINGER CHARLES L. California Forests: Trends, Problems, and Opportunities. USDA Forest Service Resource Bulletin PNW-89. (1980), 138 pages. Most recent information on forest area in California, volume of timber, ownership of forest resources, and rate of use and replenishment. Analysis of physical opportunities to increase timber production and discussion of problems relating to timber production as well as: detailed statistical tables; historical sketch of California forestry; profile of the state's forest industry; discussion of past, present, and future timber harvest; and a brief summary of nontimber forest resources.

1474. 56 IB2 CONSIDINE THOMAS J. JR., POWELL DOUGLAS S. Forest Statistics for Pennsylvania - 1978. USDA Forest Service Resource Bulletin NE-65. (1980), 88 pages. Statistical report on the third forest survey of Pennsylvania conducted in 1977 and 1978. Current status of forest-land area, timber volume, and annual growth and removals as well as timber products output by timber industries.

1475. 56 IB2 ELLIS THOMAS H., MACE ARNETT C. JR. "Forest Research in Florida." Journal of Forestry, Vol. 79, No. 8 (1981), pages 502-505, 515. Florida is experiencing serious land-use conflicts due to dramatic increases in population and economic activity. Forest managers have increased timber growth despite these conflicts. Many groups are cooperating in diverse research efforts

to provide the basis for continued productivity of the state's fifteen million acres of commercial forestland.

1476. 56 IB2 FELT DOROTHY G. Forest Area and Timber Resource Statistics for the Beartooth Working Circle, Montana, 1977. USDA Forest Service Resource Bulletin INT-24 (1980), 22 pages. Land area, commercial timberland area, timber inventory, and growth and mortality data based on Resources Evaluation standards.

1477. 56 IB2 JAKES PAMELA J. Minnesota Forest Statistics, 1977 USDA Forest Service Resource Bulletin NC-53 (1980), 85 pages. Forest area, timber volume, net annual growth, timber removals, mortality, and timber products output based on Fourth Minnesota Forest Inventory.

1478. 56 IB2 JAKES PAMELA J. The Fourth Minnesota Forest Inventory: AREA. USDA Forest Service Pesource Bulletin NC-54 (1980), 37 pages. In 1977 the fourth Minnesota Forest Inventory found 13.7 million acres of commercial forestland, down 11 percent from 1962. Analysis of the inventory and tables of forest area.

1479. 56 IB2 KNIGHT HERBERT A. "A Closer Look at South Carolina's Hardwoods." In, Proceedings of the Eighth Annual Hardwood Symp., Asheville, NC (1980), pages 164-181.

1480. 56 IB2 MCCLURE JOE P. "Multiresource Inventories -- Meeting Future Information Needs." In, Proceedings: Timber Supply: Issues and Options. For. Prod. Res. Soc., Madison, WI (1979), pages 67-69. South Carolina was selected as a pilot state to test new multiresource inventory concepts and procedures. Evaluation subjects and information needs developed for the pilot study have been improved and are now being used in Florida. Future information needs will be met by expanding this and other inventory research as rapidly as possible.

1481. 56 IB2 OSWALD DANIEL D. Forests and Timber Resources of California's Central Coast. USDA Forest Service Resource Bulletin PNW-83 (1979), 56 pages. Summary of the findings of a 1972 inventory, includes tables of area, timber volume, timber growth and harvest, and mortality, discussion of current timber resources and potential limitations on their availability.

1482. 56 IB2 PAILLE G. "A Canadian Perspective on Intensive Forest Management in Sweden." Pulp and Paper Canada, Vol. 82, No. 6 (1981), pages 56, 59, 61, 63. Both Sweden and Canada must minimize timber losses, harvest the maximum amount of fiber permissable and grow more wood now to satisfy their timber demand.

1483. 56 IB2 SHEFFIELD RAYMOND M. Forest Statistics for Central Florida 1980. USDA Forest Service Resource Bulletin SE-55 (1981), 33 pages. Since 1970 commercial forest land declined by 202,000 acres (8 percent) and now occupies 2.5 million acres (25 percent) of the land area. Nonindustrial private landowners control 84 percent of these forests. Inventory of softwood and hardwood growing stock increased by 19 and 24 percent with softwood species making up 58 percent of the inventory. Net annual growth of growing stock totaled 96 million cubic feet, 111 percent more than annual timber removals.

1484. 56 IB2 SPENCER JOHN S. JR., JAKES PAMELA J. Iowa Forest Resources, 1974. USDA Forest Service Resource Bulletin NC-52 (1980), 90 pages. Second inventory of Iowa's forest resources shows declines in commercial forest area and in growing-stock and sawtimber volumes between 1954 and 1974. Text and statistics on forest area and timber volume, growth, mortality, ownership, stocking, future timber supply, timber use, forest management opportunites, and nontimber resources.

1485. 56 IB3 ALEKSEFV V.A., DOLGOR N. "The Current State of Forestry in Mongolia." Lesnoe Khozyaĭstvo, No. 5 (1980) in Russian. Pages 69-70. Cited in Forestry Abstracts, Vol. 42, No. 6.

1486. 56 IB3 ANDERSSON FOLKE "The Swedish Coniferous Forest Project." Ambio, Vol. 10, No. 2/3 (1981), pages 126-129 Swedish contribution to the MAB program, "Ecological effects of different land uses and management practices on temperate and Mediterranean forest landscapes." Project was set up in 1972 to investigate, on a basic research level, the structure and function of an environment of great economic and cultural importance to Sweden.

1487. 56 IB3 BAGNARESI U. "Forestry Planning in Italy." Italia Agricola, Vol. 117, No. 1 (1980) In Italian. Pages 21-34. Cited in Forestry Abstracts, Vol. 42, No. 6.

1488. 56 IB3 BALABANIAN O. "Forests, A Source of Conflicts in the Limousin Hills." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 255-262.

1489. 56 IB3 BEDLINSKIĬ S.V. "Forests in the Defense of Moscow." Lesnaya Promyshlennost', No. 5 (cited in Forestry Abstracts Vol. 42, No. 3). (1980). In Russian. Inside front cover, 4-5. Historical account of forest defenses used in 1941 against the Germans. Main defenses were obstructions formed by deliberate felling and rows of posts used to prevent tank advance. Fuelwood supply to Moscow, organizational and personal details of the defense role of the forest service.

1490. 56 IB3 BROSSELIN A. "The Forest Resources of the Communes in the Gold Coast in the Nineteenth Century." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 172-179.

1491. 56 IB3 FODGAARD S., HELLES F., JØRGENSEN A.A. WALTER Land Use Competition between Agriculture and Forestry in Denmark. Report No. 9 (Series 2) Dept. of Forestry, Royal Veterinary and Agricultural University, Thorvaldsensvej 57 DK 1871, Kobenhavn V, Denmark (1981) In Danish. 85 pages. Research on the comparative competition for land between agriculture and forestry under present Danish conditions, mainly from a business economic point of view, but supplemented by considerations of the regional economic implications. Aim is to improve the basis for decisions about land use on a regional level, the fundamental assumption being that marginal farmland might, within a few years, be converted into forestry if economically reasonable.

1492. 56 IB3 FRUHAUF C. "From Peasant Forestry to Capitalist Forestry in the Pays de Sault under the Old Regime." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 160-165.

1493. 56 IB3 GARRIER G. "Reforestation in the Rhone and the Part Played by the Council General in the Second Half of the Nineteenth Century." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 166-171.

1494. 56 IB3 GENSSLER E. "Natural Forest 'Cells' in North Rhine-Westphalia." Nederlands Bosbouw Tijdschrift, Vol. 52, No. 4. (1980) In German with Dutch summary. pages 104-112. Cited in Forestry Abstracts Vol. 42, No. 5. Recent history, selection, management and functions of forest reserves established first in this state in 1970 and later in other parts of West Germany.

1495. 56 IB3 GRAINGER ALAN "Reforesting Britain." The Ecologist, Vol. 11, No. 2 (1981), pages 56-81. Covers: historical overview; effects of deforestation; world timber supply; Britain's present wood needs; integrating farming and forestry; new types of silviculture; land availability; funding the forests.

1496. 56 IB3 JOLAS T. "Communal Forests at Minot, Gold Coast." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 218-229.

1497. 56 IB3 KROTH W., BARTELHEIMER P. Improvements of the Methodical Basis for the Test-Enterprise Network in Forestry, An Expert's Report for the Federal Department of Nutrition, Agriculture, and Forestry. Federal Department of Nutrition, Agriculture, and Forestry, Bonn. (1981) In German. 81 pages. Status and trends of German forestry are investigated through a sample of enterprises. One recommendation for improvement: include smaller holdings for a more representative sample.

1498. 56 IB3 MIEGROET M. VAN, VERHEGGEN J.F. The Forest of the Twenty-first Century. Part II: Functions and Means. Groere Band N 36 (1979) In French. 26 pages.
Taken from: Outdoor Recreation Economics: Methods of Valuing Recreation Resources. Bibliography on recreation economics, sponsored by IUFRO and George Washington Univ., Dept. of Human Kinetics and Leisure Studies (1981). Analysis of a report to the president by Bertrand de Jouvenal on the importance of the forest and its confrontation with the actual situation in Belgium. Relative importance of the economic, ecological and social functions of the forest are studied and their interaction assessed, resulting in the fixation of levels of investment and actual costs. Sound recreation policy is required to optimize forest use.

1499. 56 IB3 MORY P., SEVRIN R. "Villages and Forests. A Relic Forest in a Region with Few Woodlands." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 238-254.

1500. 56 IB3 OHGANE E. "Problem and Method of Forestry Management." Journal of the Japanese Forestry Society, Vol. 61, No. 2 (cited in Forestry Abstracts Vol. 42, No. 4). (1979). In English with Japanese summary, pages 41-46. Forest management has become too theoretical in Japan, and is often regarded as a form of business economics, with insufficient attention to practical technology and long-term maintenance of productivity.

1501. 56 IB3 PACHER J. "Economic and Forest Policy Concepts in German Forestry Literature of the Second Half of the Eighteenth Century." Allgemeine Forst- und Jagdzeitung, Vol. 151, No. 9 (cited in Forestry Abstracts Vol. 42, No. 4). (1980). In German with summaries in English and French, pages 157-160.

1502. 56 IB3 PARDÉ J., TOMIMURA S. "Forests and Forest Research in Japan." Revue Forestière Française, Vol. 32, No. 5 (1980) In French, pages 490-500.

1503. 56 IB3 PLOCHMANN RICHARD "Forestry in the Federal Republic of Germany." Journal of Forestry, Vol. 79, No. 7 (1981), pages 451-454. The Federal Republic of Germany is intensively and realistically practicing multiple use management. Diversity in stands, age classes, and treatment is the key to achieving their objectives while also providing timber for industry.

1504. 56 IB3 RINAUDO Y. "Forests and Agricultural Land. The Example of the Var in the Nineteenth Century." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981), In French. pages 136-148.

1505. 56 IB3 SHOARD M. The Theft of the Countryside. London: Temple Smith (1980), 272 pages. Cited in Forestry Abstracts Vol. 42, No. 5. Critique of the ways intensive agriculture and forestry are destroying the traditional patterns of the English countryside and its wildlife. Suggests the extension of the planning system to cover farming and forestry activities with the creation of regional countryside planning authorities, and the establishment of six new national parks in areas of lowland England where pressure is most intense.

1506. 56 IB3 TAGA LEONORE SHEVER Externalities in the Soviet Economy: Forestry Problems and Policies. Ph.D. Dissertation, Univ. of Calif., Berkeley. (1979), 395 pages.

1507. 56 IB3 VIGIER PH. "The Forestry Troubles of the Farly Nineteenth Century in France." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 128-135.

1508. 56 IB3 VUOKILA YRJÖ "Forestry in Finland Now and in the Future." Quarterly Journal of Forestry, Vol. 75, No. 2 (1981), pages 97-101. Finland will be able to provide the international markets with high-quality timber in adequate quantities continuously in the future.

1509. 56 IB3 WIĘCKO E. "Trends in Forestry in Poland." Mitteilungen der Bundesforschungsanstalt fUr Forst- und Holzwirtschaft. No. 119 (1978) In German with an English summary. Pages 65-81. Cited in Forestry Abstracts, Vol. 42, No. 6. Historical developments, statistics and present policies with regard to forest estate, forest management, silviculture, labor, mechanization, amenity, administration and research. Data on hunting and minor forest products in 1975, areas of national parks and reserves, and timber production in 1960, 1975 and 76.

1510. 56 IB3 ZEHETMAYR J.W.L. "Forestry in South Wales 1960-80." Forestry, Vol. 54, No. 1 (1981), pages 89-106.

1511. 56 IB3 "Forestry in Southern Tyrolia." Allgemeine Forstzeitung, Vienna, No. 5 (1981) In German. Pages 137-162. Development, state, and prospects of the mostly mountainous forests on the southern side of the alps are described in a series of articles.

1512. 56 IB4 BARTON I.L., HORGAN G.P. "Kauri Forestry in New Zealand, a Protagonist's View." New Zealand Journal of Forestry, Vol. 25, No. 2 (1980), pages 199-216. Over the next decade the virtual cessation of timber extraction from virgin kauri forests is inevitable. If New Zealanders wish to use kauri timber in the future it will have to be taken from intensively managed regenerating stands designated for timber production, and from artificially established stands.

1513. 56 IB4 FAEHSER L. "An Information System for Forestry in Brazil." Allgemeine Forst- und Jagdzeitung, Frankfurt a.M., No. 7 (1981) In German with English and French summaries, pages 136-139. The numerous forest enterprises in Brazil suffer from a lack of organized access to information. The forestry faculty in Curitiba has learned, through questionnaires, what kinds of information are needed.

1514. 56 IB4 WRIGHT J.P. "The Trouble with Pines! Public Criticism of Softwood Plantation Development." Australian Forestry, Vol. 43, No. 3 (1980), pages 189-194. Marked escalation in softwood planting in Australia in recent years has coincided with an increase in public awareness and criticism of forestry, particularly with regard to possible adverse environmental effects of plantation development activities. Actions taken to date in response to criticism are outlined and some proposals made concerning future management of softwood plantation development.

1515. 56 IB5 DOSSO HENRI, GUILLAUMET JEAN LOUIS, HADLEY MALCOLM "The Tai Project: Land Use Problems in a Tropical Rain Forest." Ambio, Vol. 10, No. 2/3 (1981), pages 120-125. The Tai Forest in the southwestern Ivory Coast is the scene of rapid population growth and substantial development, which are quickly changing the last large tract of evergreen rain forest in West Africa; but it is an area where research can still demonstrate that the needs of development are compatible with the needs of conservation.

1516. 56 IB5 GRAINGER ALAN "The State of the World's Tropical Forests." The Ecologist, Vol. 10, No. 1/2 (1980), pages 6-54. Covers: regional survey; threats to the forest, shifting cultivation, conflagration, mining; wild life trade; wood export; questionable logging systems; cultural consequences of deforestation; forest dwellers; world wide ecological implications of tropical deforestation.

1517. 56 IB5 GULÇUR M. "Wood Drain from the Forest of Somalia." Somali Range Bulletin, No. 10. (1980), pages 5-8. Cited in Forestry Abstracts, Vol. 42, No. 6. Current resources are likely to be exhausted in ten years or less. Plantations are recommended.

1518. 56 IB5 HERRERA RAFAEL, JORDAN CARL F., MEDINA ERNESTO, KLINGE HANS "How Human Activities Disturb the Nutrient Cycles of a Tropical Rainforest in Amazonia." Ambio, Vol. 10, No. 2/3 (1981), pages 109-114. Tropical rainforests of the Amazon Basin have evolved highly effective mechanisms for recycling nutrients - mechanisms which the authors believe are largely independent of the nutrient supply from the soil, enabling the forests to prosper even on poor soils. But those mechanisms stop functioning when the forests are disturbed, and the nutrients irretrievably lost.

1519. 56 IB5 KARTAWINATA KUSWATA, ADISOEMARTO SOENARTONO, RISWAN SOEDARSONO, VAYDA ANDREW "The Impact of Man on a Tropical Forest in Indonesia." Ambio, Vol. 10, No. 2/3 (1981), pages 115-119. Extensive logging operations in Indonesia's East Kalimantan province have caused considerable damage to the remaining forest, resulting in "genetic erosion" and the extinction of some species. Local population has derived little direct benefit from commercial logging operations.

1520. 56 IB5 PANT M.M. "The Impact of Social Forestry on the National Economy of India." The International Tree Crops Journal, Vol. 1, No. 1 (1980), pages 69-92. Analysis of economic benefits of examples of the three main components of social forestry: farm forestry on private land, rural forestry on commercial land, and urban forestry. Pioneering social forestry programs of Gujarat state and difficulties of protecting trees on communal land.

1521. 56 IB5 PAPÁNEK FRANTIŠEK "Forests and Their Improvement in Algeria." Lesnícky Časopis, Vol. 27, No. 2 (1981), In Czech with an English summary, pages 167-171.

1522. 56 IB5 PRAKOSO S.H. "Challenge Faces Indonesia in the Future Development of Its Forest Resources." Agricultural Information Development Bulletin, Vol. 2, No. 2 (1980), pages 10-13. Also published in Indonesian Agricultural Research and Development Journal, Vol. 1, No. 3/4 (1979). Cited in Forestry Abstracts Vol. 42, No. 5.

1523. 56 IB5 ROMM JEFF "The Uncultivated Half of India, Part I." The Indian Forester, Vol. 107, No. 1 (1981), pages 1-23. Conditions for investment; land classification; management units, to organize people for investment in uncultivated lands.

1524. 56 IB5 ROUTLEY RICHARD, ROUTLEY VAL "Destructive Forestry in Melanesia and Australia." The Ecologist, Vol. 10, No. 1/2 (1980), pages 56-67.

1525. 56 IB5 SOUTH P.M., MOORE D. Forestry Development Project Sarawak, Malaysia. The Coordination and Development of Forestry and Forest Industries in Sarawak. Rome: FAO, Forestry Dept. Field Document 1. (1980), 33 pages.

1526. 56 IB5 SWAMINATHAN M.S. "Indian Forestry at the Crossroads." The International Tree Crops Journal, Vol. 1, No. 1 (1980). In English with French and Spanish abstracts, pages 61-67. There is a need to review national forestry policy, and unless forestry can become a people's movement, rather than remain the responsibility of forestry departments, ecological security and timber need requirements cannot be guaranteed. New forestry policy should contain: changes in public policy, technological support, and full services.

1527. 56 IC ASSIER-ANDRIEU L. "Customary Rights in the Forestry Question. The Struggles of a Community in the French Catalan Pyrenees, 1820-1828." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 149-159.

1528. 56 IC BINKLEY CLARK S. "Regional Planning." Nonindustrial Private Forests: Data and Information Needs, Conference Proceedings. Center for Resource and Environmental Studies, Duke University, Durham, NC 27706, USA. (1981), pages 33-39. Information needs for regional forestry planning, with special attention to private nonindustrial forests.

1529. 56 IC CARRON L.T. "Self-Sufficiency in Forest Policy in Australia." Australian Forestry, Vol. 43, No. 3 (1980), pages 203-209. Arguments for a policy of self-sufficiency (complete replacement of imports by a home grown equivalent, particularly from coniferous plantations) and the present status of self-sufficiency, on a state and a national basis, are reviewed. It is suggested that, by contrast with a policy of self-sufficiency, the Australian Forestry Council's view that "forest policy throughout Australia should be directed towards ensuring that Australia's long term capability to supply such of its own requirements of forest products as might be consistent with economic and environmental considerations" seems at present more socially, economically and politically realistic.

1530. 56 IC CLERC F. "Forest Policy: Persona, Institutions and Development." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 354-363.

1531. 56 IC CORTNER HANNA J., SCHWEITZER DENNIS L. "Institutional Limits to National Public Planning for Forest Resources: the Resources Planning Act." National Resources Journal, Vol. 21, No. 2 (1981), pages 203-222.

1532. 56 IC GOETZ V., KRONSCHELL K., WINKLER W. Concise Dictionary of Agricultural Rights, Vol. I. Erich Schmidt Verlag, Berlin (1981) In German. Contains articles on forest planning, cooperatives, neighborhood legislation, forest rights, statistics and administration.

1533. 56 IC GREGERSON H., CONTRERAS A. Economic Analysis of Forestry Projects. FAO Forestry Paper No. 17. Rome: FAO (1979). In French, 193 pages.

1534. 56 IC GREGERSON H., CONTRERAS A. Economic Analysis of Forestry Projects: Case Studies. Forestry Paper No. 17 Supp. 1, Rome: FAO. (1979). Six case studies, each numbered separately.

1535. 56 IC GREGERSON H., CONTRERAS A. Economic Analysis of Forestry Projects: Readings. FAO Forestry Paper No. 17, Supp. 2 Rome: FAO (1980), 216 pages.

1536. 56 IC MOULIN A. "Some Facts Relating to French Forest Policy." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 364-367.

1537. 56 IC OGDEN GERALD RUPERT "Forestry for a Nation: The Making of a National Forest Policy under the Weeks and Clarke-McNary Acts, 1900-1924." Ph.D. dissertation, The University of New Mexico. (1980) Available through University Microfilms International.

1538. 56 IC PLESCHBERGER WERNER "Forestry Theory." Centralblatt für das Gesamte Forstwesen, Vol. 98, No. 1 (1981). In German with an English abstract, pages 29-55.

1539. 56 IC ROMM JEFF "The Uncultivated Half of India (Part II) Formation of Investment-Oriented Policy." The Indian Forester, Vol. 107, No. 2 (1981), pages 69-85. Features of administrative and market systems that affect uses of uncultivated lands and how they might be modified to increase investment in these lands. Considers aspects of policy that presently constrain or might stimulate investment in the uncultivated half, and concludes that present policy does not appear to be governed primarily by the purpose to increase land productivity.

1540. 56 IC ROSS LESTER STUART "Forestry Policy in China." Ph.D. dissertation, The University of Michigan. (1980) Available through University Microfilms International.

1541. 56 IC SHANDS W.E., HAGENSTEIN P.R., ROCHE M.T. National Forest Policy: from Conflict toward Consensus. Washington, D.C., U.S.A. The Conservation Foundation (cited in Forestry Abstracts Vol. 42, No. 4). (1979), 37 pages. Past, present, and possible future directions of U.S. national forest policy, considering in particular the debate over clear felling and wilderness designation, and the National Forest Management Act of 1976. Increasing demand for, and conflict between different types of recreation in relation to various forest management options.

1542. 56 IC SPURR STEPHEN H. "Clearcutting on National Forests." Natural Resources Journal, Vol. 21, No. 2 (1981), pages 223-243. Analysis of how the clearcutting controversy has evolved provides a valuable case study to demonstrate that our administrative, legislative, and judicial processes can work.

1543. 56 IC TIKKANEN ILPO "Causality as a Conceptual Frame for Forest Policy Analysis." Silva Fennica, Vol. 15, No. 1 (1981), pages 30-37. A general frame of reference for empirical policy analysis, upon which the effectiveness analysis of forest policy is also based.

1544. 56 IC TIKKANEN ILPO "Effects of Public Forest Policy in Finland, an Econometric Approach to Empirical Policy Analysis." Silva Fennica, Vol. 15, No. 1 (1981), pages 38-64.

1545. 56 IC ZUNDEL R. "The New Forest Legislation in Hesse, Lower Saxony and Schleswig-Holstein." Forst- und Holzwirt, Vol. 34, No. 2 (cited in Forestry Abstracts Vol. 42, No. 4). (1979). In German, pages 31-35. Differences between these states in their interpretation of the German federal forest law of 1975, concerning the high proportion of forestland area and public forests in Hesse and the much lower proportion of both in the two northern states.

1546. 56 IC Irish Forestry Policy. National Economic and Social Council Publication, Irish Republic, No. 46 (cited in Forestry Abstracts Vol. 42, No. 3). (1979), 225 pages. Introduction and commentary by the Council and a report by F.J. Convery that includes: background, existing forest estate (including forest industry and marketing), proposals for expansion, summary and recommendations.

1547. 56 IC Planning Methodology - Guide to the Economic Evaluation and Financing of Forestry Projects. Paris, Institute for the Study of Economic and Social Development. (1980). In French, 70 pages.

1548. 56 IDlA NELSON CHRIS JR. "The I.R.S. Viewpoint on Administration of the Timber Provision of the Internal Revenue Code." Timber Tax Journal, Vol. 15, No. 1 (1979), pages 21-27.

1549. 56 IDlA RIIHINEN PÄIVIÖ "Effectiveness of Forest Taxation Reform as a Means of Economic Policy." Silva Fennica, Vol. 15, No. 1 (1981), pages 92-99. Taxation and aggregate demand; forest taxation in Finland; forest taxation and public revenue; effect on investment, production and employment; equating differences in regional and personal income; effect on the balance of payments; static vs. dynamic analysis.

1550. 56 IDlA THOMPSON EARL G., JORDAN ROBERT D. "Income, Estate, and Property Tax Aspects of Investments in Marginally Productive Farmland." Journal of Real Estate Taxation, Vol. 6 (1978), pages 46-66. Summarized in Timber Tax Journal, Vol. 16, No. 1. Tax advantages and disadvantages associated with investments in farmland and timberland with only marginal productive capability, and effects of state assessment practices, federal income tax laws, and federal estate and gift tax laws on the investment.

1551. 56 ID1B CHEYNEL P. "Forest Taxation (in France). Timber Merchants and Value Added Tax." Forêt Privée, No. 120. (1978) In French, pages 15-18. Cited in Forestry Abstracts, Vol. 42, No. 6.

1552. 56 ID1B WEAD JAMES K. Timber Taxation in the States. The Council of State Governments, Lexington, Kentucky. (1978), 42 pages. Cited in Timber Tax Journal, Vol. 16, No. 1. Results of a survey of existing types of taxes levied by states or authorized by states to be levied by local governments on timber and forestland. Discussion of tax administration includes details on the agencies within the state governments that are responsible for valuation of property, valuation of standing timber, and tax collection.

1553. 56 ID1C BOELTER ALLEN H. "The Forest Land Owner and His Income Tax." National Woodlands, Vol. 1, No. 7 (1979), pages 5-6. Summarized in Timber Tax Journal, Vol. 16, No. 1. Qualification for long-term capital gains treatment with the three basic types of timber sales: lump sum, pay as cut, and use in trade or business; types of casualty losses which may be deductible; and the minimum tax established by the Tax Reform Act of 1976.

1554. 56 ID1C CARTER T. HEYWARD JR. "The Application of Section 2032A to the Valuation of Timberland for Federal Estate Tax Purposes." South Carolina Law Review, Vol. 29, No. 4 (1978), pages 577-625. Summarized in Timber Tax Journal, Vol. 16, No. 1. Comprehensive review of Section 2032A and its application to estates which include timberland.

1555. 56 ID1C CHEYNEL P. "Forest Taxation (in France). The Exploitation of a Forest and Direct Taxes." Forêt Privée, No. 118 (1977) In French. Pages 15-20. Cited in Forestry Abstracts, Vol. 42, No. 6.

1556. 56 ID1C CHEYNEL P. "Forest Taxation (in France). The Sale of a Forest or of Parts of a Forestry Group, as It Concerns Income Tax." Forêt Privée, No. 119. (1978) In French. Cited in Forestry Abstracts, Vol. 42, No. 6.

1557. 56 ID1C OFFICER DENNIS T., BANKS WARREN E. "Estates vs. Gifts in a Period of Inflation." Taxes - The Tax magazine, Vol. 58, No. 1 (1980), pages 68-72. Summarized in Timber Tax Journal, Vol. 16, No. 1. Arithmetical tool for evaluating the tradeoff between a present gift or a future transfer at death of appreciating assets such as forest land and timber.

1558. 56 ID1C OLSON SCOTT C., HANEY HARRY L. JR., SIEGEL WILLIAM C. "State Death Tax Implications for Private Nonindustrial Forestry." Forest Products Journal, Vol. 31, No. 7 (1981), pages 28-38.

1559. 56 ID1C PATAT C. "Problems of (French) Forest Taxation for Persons Taxed on Real Income." Forêt Privée, No. 121 (1978). In French, pages 19-23, 25-31. Cited in Forestry Abstracts, Vol. 42, No. 6.

1560. 56 ID1C SUTHERLAND CHARLES F., SIEGEL WILLIAM C. "How Gifting between Spouses Can Reduce Forest Estate Taxes." Journal of

Forestry, Vol. 77, No. 10 (1979), pages 655-657. Summarized in Timber Tax Journal, Vol. 16, No. 1. How changes made in the federal estate tax by the 1976 Tax Reform Act affect timber estates held jointly by husband and wife.

1561. 56 ID2 BARE B.BRUCE "Forest-Land Valuation in Washington State: Controversy over Methodology." Assessor's Journal, Vol. 13, No. 2 (1978), pages 81-99. Summarized in Timber Tax Journal, Vol. 16, No. 1. Eligible forest land in Washington State is subject to an annual ad valorem tax based on "current forest use." Review of abstraction method (comparison of actual market sales evidence by a land appraiser) and regression analysis method used by the Washington State Department of Revenue to determine fair market value of bare forest land; comparison of the results of each with values based on an income approach, and discussion of the relationship between bare land and timber-stand values for trees of various ages.

1562. 56 ID2 POLENO Z. "Complex Evaluation of Mixed Forest Stands." Communicationes Instituti Forestalis Cechoslovenise No. 11 (1979) In English with summaries in Czech and Russian. Pages 113-126. Cited in Forestry Abstracts Vol. 42, No. 5. Studies on the financial value of mixed stands with special reference to methodology.

1563. 56 ID2 TURKEWITSCH I. W. "Complex Economic Evaluation of Forests." Lesnoe Chozjajstwo, Moskau 1 (1979) In Russian. Pages 12-17. Taken from: Outdoor Recreation Economics: Methods of Valuing Recreation Resources. Bibliography on recreation economics, sponsored by IUFRO and George Washington Univ., Dept. of Human Kinetics and Leisure Studies (1981). Economic evaluation of the recreational function of forests is defined by the value of the hours that are spent in the forest. Value of one recreational hour is equated with the value of one work hour. This value is defined by the quotient of the national income and the number of work hours diminished by the expenses for recreation in the forest.

1564. 56 ID2 WIENER ALFRED A. "Appraising National Forest Timber Values: A Concept Reexamined." Journal of Forestry, Vol. 79, No. 6. (1981), pages 372-376. Due to nonstable markets, some modification of earlier appraisal methods seems necessary. A "lump-sum equivalent" is developed through the use of an inflation factor to set off against the discount factor.

1565. 56 ID4 FROEHLICHER R. "The Forests as One of the Roots of Regional Identity in the Countries of the Rhine." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 230-237.

1566. 56 ID4 GELLAR SHELDON "Village Woodlot Schemes and Peasant Survival Strategies in Sahelian Mali." Paper presented at African Studies Association Annual Meeting for Panel on Renewable Natural Resources Management in the Sahel: the Issue of Popular Participation. (1980), 19 pages.

1567. 56 ID4 GROSHENS M.C. "Forests and Habitat." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 263-272.

1568. 56 ID4 KERNAN F.S. Children, Forests and Trees. Rome: FAO, Forestry Dept. (1980). In English, Spanish and French, 29 pages.

1569. 56 ID4 THOMSON JAMES T. "Peasant Perceptions of Problems and Possibilities for Local-level Management of Trees in Niger and Upper Volta." Paper presented at African Studies Association Annual Meeting for Panel on Renewable Natural Resources Management in the Sahel: the Issue of Popular Participation. (1980), 22 pages.

1570. 56 ID4 VERDIER Y. "Paths in the Forest. The Folk Tales." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 344-352.

1571. 56 ID5 BOISSIÈRE J. "Foresters and Timber Merchants from the Mowan to Paris." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 180-188.

1572. 56 IE GUILLARD J. "The Present State of Research in Forest Economics in France." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 89-91.

1573. 56 IE JOHNSTON D.R. The Formulation of Research Programs. Research and Development Paper, Forestry Commission, No. 126. (1980), 16 pages. Cited in Forestry Abstracts Vol. 42, No. 5. Discussion of the formulation of applied research programs in forestry from the viewpoint of finance, organization, and identification of projects.

1574. 56 IE MCCLURE JOE P. "Gathering Multipurpose Inventory Data." Nonindustrial Private Forests: Data and Information Needs, Conference Proceedings. Center for Resource and Environmental Studies, Duke University, Durham, NC 27706, USA. (1981), pages 75-82. Statewide forest inventories have been conducted throughout the US by the Nationwide Forest Survey for almost fifty years. Prior to the 1974 Forest and Rangeland Renewable Resources Planning Act (RPA) these periodic state-by-state timber inventories were restricted to commercial timberlands and data gathering was limited to timber oriented forest classifications and to measurements of volume, growth, and removals of traditional timber products. The 1974 RPA and other more recent legislation gave the Forest Survey a new and broader responsibility for gathering information on both timber and nontimber forest and range resources. As a result of the RPA, Forest Survey was transformed into a multiresource inventory organization and renamed Renewable Resources Evaluation (RRE).

1575. 56 IE MORANDINI R. "Fields of Forestry Research." Italia Agricola, Vol. 117, No. 1 (1980) In Italian. Pages 93-102. Cited in Forestry Abstracts, Vol. 42, No. 6. Forestry research centers in Italy, their work, and areas where research is needed.

1576. 56 IE SPEIDEI G. "Reflection on the Present Situation and Future Problems of Forest Science Research." Forst-wissenschaftliches Centralblatt, Vol. 100, No. 1 (1981). In German with an English summary. Pages 15-27. Improvement in supplying the economy with roundwood and melioration of the environment are the main tasks in forest research. Macroeconomic goals can be reached by choosing forest species appropriate to local soil conditions, as well as by the structure of the stands and diminution of production inefficiency.

1577. 56 IE YOUNGS R.L. "What Research Is Called for?" In, Proceedings, Timber Supply: Issues and Options, held in San Francisco, California, October 2-4, 1979. Published by Forest Products Research Society, 2801 Marshall Court, Madison, WI 53705. Proceedings No. P-79-24. (1979?), pages 216-218.

1578. 56 IG CASTILLO R.A. DEL "Education and Training Needs in Support of Forestry for Local Community Development (in the Philippines)." In, FAO/SIDA Seminar on Forestry in Rural Community Development. (1980), pages 127-143.

1579. 56 IG CLARK C.C. "Appropriate Extension and Communication Systems for Promoting and Sustaining Forestry in Rural Community Development." In, FAO/SIDA Seminar on Forestry in Rural Community Development. (1980), pages 115-120.

1580. 56 IG KING K.F.S. "Forestry's Contribution to Social and Economic Development." The Commonwealth Review, Vol. 59, No. 4 (1980), pages 527-536.

1581. 56 IG MCARTHUR LAURENCE BARRETT "The Impact of Various Forest Management Practices on Passerine Community Structure." Ph.D. dissertation, West Virginia University. (1980) Available through University Microfilms International.

1582. 56 IG TOMÁS J. GONZALO FERNÁNDEZ "An Institutional Framework for Development-Oriented Forestry." Unasylva, Vol. 32, No. 127 (1980), pages 34-37. What is needed is a change from current attitudes focused on knowledge of the resources to an approach directed primarily toward man and his needs.

1583. 56 IG Report of the FAO/SIDA Seminar on Forestry in Rural Community Development. FAO, Rome Forest Resources Div. (1980), 176 pages.

1584. 56 IH BURLEY J., NAMKOONG G. "Conservation of Forest Genetic Resources.". Invited paper prepared for the Eleventh Commonwealth Forestry Conference, Trinidad, (1980), 25 pages. Needs for conservation of forest genetic resources in relation to moral commitments to future generations of man and to technical requirements for future markets and environments.

1585. 56 IH LUGO ARIEL E., BROWN SANDRA "Ecological Monitoring in the Luguillo Forest Reserve." Ambio, Vol. 10, No. 2/3 (1981), pages 102-107. 11,000 hectares of mountainous tropical forest in

Puerto Rico supply water for more than 200,000 people. Conservation policies are guided by almost 100 years of continuous ecological monitoring.

1586. 56 IIA3 SCHOEPFER W., DUMMEL K. "One Year of Improved Assortment Piece Rate - Interim Results and Prospects." Der Forst- und Holzwirt, Hannover, No. 6 (1981) In German. Pages 125-137. Improved piece rate has proven to be an easily applied and flexible wage system after a one-year test run.

1587. 56 IIA3 STEVENS JAMES F. "Competency Based Training in the Forest Product Industry." Pulp and Paper Canada, Vol. 82, No. 2. (1981), pages 25-27, 31. Development of a competency based training system implemented by Simpson Timber Co. (Alberta, Canada) in response to a series of specific needs. Included are step by step design procedures, which can be utilized to create educational packages; cost effectiveness; and results of the program.

1588. 56 IIA5 PFNNETIER CL. "Woodcutters in the Cher Department at the End of the Nineteenth Century. Working Conditions, Social Consciousness, and Reaction to the Crisis in Agriculture and Forestry." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 189-203.

1589. 56 IIA5 SLÁMA O. "The Psychological Requirements for Some Occupations in Forestry." Lesnictví, Vol. 26, No. 6 (cited in Forestry Abstracts Vol. 42, No. 4). (1980). In Czech with Russian, English, German, and French summaries, pages 511-520. Relative importance of various psychological characteristics and their minimum and optimum levels were determined in a study of 71 workers in 7 forestry occupations: logger; drivers of trucks, tractors, wheeled skidders, and front-end loaders; felling foremen; and forestry school student (apprentice).

1590. 56 IIB2A "Forestry as Business - Domaenverket/Schweden." Allgemeine Forst- Zeitschrift, Munich, No. 3/4 (1981) In German. Pages 33-70. The Swedish State Forest Service as a forest enterprise managed almost like a private business, is described in this special issue. Also discusses which Swedish methods can be applied to German forestry.

1591. 56 IIB2B ALWARD GREGORY SCOTT "Evaluation Model for Regional Economic Aspects of Forest Service Land Management Policies." Ph.D. dissertation, Colorado State University. (1980) Available through University Microfilms International.

1592. 56 IIB2B PARRY BRIAN THOMAS "Administrative Implementation as an Element in Policy-Making: Cases from the United States Forest Service, Region 5." Ph.D. dissertation, University of California, Berkeley. (1980) Available through University Microfilms International.

1593. 56 IIB2B PINGAUD M.C. "The King's Forest in the Valois; Ethnographical Documents." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 318-332.

1594. 56 IIB2C FOX BRUCE EDWARD "A Long-Term Timber Sale Policy for Michigan's State Forests." Ph.D. dissertation, The University of Michigan. (1980) Available through University Microfilms International.

1595. 56 IIB2C LEY CH. "Forests in the Communal Budget." Schweizerische Zeitschrift fuer Forstwesen, Zuerich, No. 6 (1981) In German with a French summary. Pages 397-410. Forests, formerly the "financial backbone" of Swiss communes have lost this function in wide areas to other sources of revenues. The situation must be evaluated and goals defined.

1596. 56 IIB2C SPEICH A.P. "Forests in the Community." Schweizerische Zeitschrift fuer Forstwesen, Zuerich, No. 6 (1981). In German with a French summary. Pages 383-395. Two thirds of Swiss forests are in the ownership of communities. Their members should engage more in questions of management policy and basic objectives to identify themselves with "their" forests.

1597. 56 IIB3A AKKERMANS P. "The Accessibility of Private Forests in Flanders." Groenkontakat 2 (1980) In French. Pages 5-6. Taken from: Outdoor Recreation Economics: Methods of Valuing Recreation Resources. Bibliography on recreation economics, sponsored by IUFRO and George Washington Univ., Dept. of Human Kinetics and Leisure Studies (1981). Conservation and management of castle-domains with park grounds and gardens, or surrounding forest poses serious problems. Leasing by public authorities of private domains, suitable for recreation and social use, is advised.

1598. 56 IIB3A ANNE R. "Rights and Obligations of a Private Owner of Suburban Forest (in France)." Forêt Privée No. 119 (cited in Forestry Abstracts Vol. 42, No. 4). (1978). In French, pages 17-21.

1599. 56 IIB3A BIRCH THOMAS W., DENNIS DONALD F. The Forest-land Owners of Pennsylvania. USDA Forest Service Res. Bull. NE-66 (1980), 90 pages. A statistical analytical report of private commercial forest-land owners in Pennsylvania. Study was conducted in conjunction with the third forest survey of Pennsylvania by the USDA Forest Service. Includes landowner characteristics, attitudes, and intentions of owners regarding reasons for owning, recreational use, timber management and harvesting, etc.

1600. 56 IIB3A BUTTOUD G. "Private Forest Owners and the State." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981) In French. Pages 96-101.

1601. 56 IIB3A DE MONTGOLFIER J., BERTIER P. "An Attempt to Express the Forestry Problem as One of Inheritance." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981) In French, pages 115-125.

1602. 56 IIB3A DEVEAUX M. "The Uses and In[illegible]tation of Forest Inventories in Private Forests." Forêt Privée No. 129 (cited in Forestry Abstracts Vol. 42, No. 4). (1979). In French, pages 40-47.

1603. 56 IIB3A HAROU PATRICE A. "Forest Ownership in the European Community." Journal of Forestry, Vol. 79, No. 3 (1981), pages 298, 307-309. Private forests comprise 60 percent of the forest area in the European Community. Pronounced fragmentation of holdings is a serious obstacle to management and regular wood supply. Average size of a private holding is about 4.5 hectares. Various fiscal and nonfiscal incentives are used to foster management of these properties.

1604. 56 IIB3C BINKLEY CLARK SHEPARD Timber Supply from Private Nonindustrial Forests, a Microeconomic Analysis of Landowner Behavior. Yale University: School of Forestry and Environmental Studies Bulletin No. 92 (1981), 97 pages. Microeconomic model incorporating timber and nontimber objectives for improving estimation of timber supply from private non-industrial forests.

1605. 56 IIB3C BRABÄNDER H.D. "Subsidies and Efficiency in Forestry Cooperatives." Silva Fennica, Vol. 15, No. 1 (1981), pages 79-84. Forestry cooperatives in the Federal Republic of Germany, economic analysis of coops.

1606. 56 IIB3C CHAUSSIN E. "Villagers and Their Forests." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 311-317.

1607. 56 IIB3C HOLMES W.D., TODD J.D. Economic Survey of Private Forestry Income and Expenditure, Scotland 1978. Dept. of Forestry, Univ. of Aberdeen. (1980), 55 pages.

1608. 56 IIB3C HOLMES W.D., TODD J.D. Economic Survey of Private Forestry Income and Expenditure, Scotland 1979. Dept. of Forestry, Univ. of Aberdeen. (1981), 55 pages.

1609. 56 IIB3C HOLMES W.D., TODD J.D. Economic Surveys of Private Forestry, Costs of Operations in Scotland for Forest Year 1978. Department of Forestry, University of Aberdeen (1981), 46 pages.

1610. 56 IIB3C HOLMES W.D., TODD J.D. Economic Surveys of Private Forestry, Costs of Operations in Scotland for Forest Year 1979. Department of Forestry, University of Aberdeen (1981), 44 pages.

1611. 56 IIB3C JÄRVELÄINEN VELI-PEKKA "Aspects of Research Strategy in Studying Forest Owners' Behavior." Silva Fennica, Vol. 15, No. 1 (1981), pages 25-29. Research concerning forest owners' behavior plays an important role in the evaluation of the effectiveness of forest policy on small woodlands.

1612. 56 IIB3C KATO F. "The Importance of Forests as an Economic Factor of Agricultural Holdings." Allgemeine Forstzeitschrift, No. 11 (1981) In German. Pages 245-250. Over 40 percent of all agricultural holdings in Germany include forests. Owners' requirements of wood, savings in the form of standing timber, and income from work in the forest are the main functions of farm forests. Their importance can be discussed only within the scope of the whole enterprise.

1613. 56 IIB3C KINGSLEY NEAI P. "The Northeastern Forest Landownership Study." Nonindustrial Private Forests: Data and Information Needs, Conference Proceedings. Center for Resource and Environmental Studies, Duke University, Durham, NC 27706, USA. (1981), pages 83-96.

1614. 56 IIB3C KURTZ WILLIAM B., LEWIS BERNARD J. "Decision-Making Framework for Nonindustrial Private Forest Owners: An Application in the Missouri Ozarks." Journal of Forestry, Vol. 79, No. 5 (1981), pages 285-288. By means of a psychological testing technique (Q-sort), owners were classified into types on the basis of their motivations and objectives in holding land. This approach seems useful where information or assistance programs are being designed to fit landowners' specific interests.

1615. 56 IIB3C MADIGAN G., JONES A.R.C. "The Private Forest Owners of Eastern Canada - a Survey." Silva Fennica, Vol. 15, No. 1 (1981), pages 65-72. A study to determine the effectiveness of private forestry assistance programs in Ontario, Quebec, New Brunswick and Nova Scotia.

1616. 56 IIB3C ROSS ELDON W. "Nonindustrial Forest-land Owners in the Southeast." In, Proceedings from the Eighth Annual Hardwood Symposium, Asheville, NC (1980), pages 32-40. In the Southeast, nonindustrial private forest lands: support 72 percent of the 289 billion board feet of sawtimber; provide 73 percent of the net annual growth of sawtimber, and 68 percent of the removals; contain 77 percent of the 52 million acres of hardwood forest types, and 75 percent of the 140 billion board feet of hardwood sawtimber; and provide 78 percent of both the net annual growth and the removals of hardwood sawtimber.

1617. 56 IIB3C ROYER JACK P., CONVERY FRANK J. Nonindustrial Private Forests: Data and Information Needs, Conference Proceedings. Center for Resource and Environmental Studies, Duke University, Durham, NC 27706, USA. (1981), 130 pages.

1618. 56 IIB3C TANAKA SHIGERU "Forest Cooperatives as a Policy Measure for Small Woodlands." Silva Fennica, Vol. 15, No. 1 (1981), pages 73-78. Organizational structure of forest cooperatives in Japan, characteristics of business, reforestation and logging practices and plans, organization of forest workers.

1619. 56 IIB3C THOMPSON RICHARD P., JONES J. GREG "Classifying Nonindustrial Private Forestland by Tract Size." Journal of Forestry, Vol. 79, No. 3 (1981), pages 288-291. Three groups by tract size: (1) 10 to 50 acres - timberland not managed commercially; (2) 51 to 700 acres - significant amount of commercial management, with size-related problems; (3) 700 or more acres - extensive commercial management. The 51- to 700-acre group seems to be the most receptive to assistance programs aimed at improving management.

1620. 56 IIC3 NIESSLEIN E. "Forest Preservation and General Forest Planning." Der Forst- und Holzwirt, Hannover, No. 4 (1981) In German. Pages 73-81. Preservation of forests is a main objective

of land use planning, especially in densely populated zones where losses of forest area have the greatest impact. At present forest planning meets this objective only partially. It can be improved by applying problem-oriented indicators for concrete cases, e.g., forest area per capita or losses of forest area per administrative unit. Second, the results of forest planning need greater significance in general land use planning and must be included in the process of political decisions.

1621. 56 IID1 DORAN A. "The Rate of Return to Forestry Investment." Quarterly Journal of Forestry, Vol. 75, No. 2 (1981), pages 83-96.

1622. 56 IID1 EID JOHN "Forest as a Capital Asset." Silva Fennica, Vol. 15, No. 1 (1981), pages 85-91.

1623. 56 IID1 JENNINGS K.S. "The Need for Regulation of Private Forestry Investment in Australia." Australian Forestry, Vol. 43, No. 4 (1980), pages 264-269. Private forestry investment began in Australia in the early 1900's, flourished until the 1930's, stopped, and was renewed in the 1960's and 70's. Activities of smaller and often questionable private companies offering investments in forestry to the public, is considered to be harmful to the forestry industry and profession, and needs to be regulated. Merits of government versus self regulation are discussed with the conclusion that a combination would be best.

1624. 56 IID1 ROW CLARK, KAISER H. FRED, SESSIONS JOHN "Discount Rate for Long-Term Forest Service Investments." Journal of Forestry, Vol. 79, No. 6. (1981), pages 367-369, 376. Authors recommend that the USDA Forest Service use a discount rate of 4 percent for evaluating long-term investments in resource management. This rate approximates the long-term measures of the opportunity cost of capital in the private sector of the U.S. economy.

1625. 56 IIIA1 BINDERNAGEL J.A. Forestry and Forest Industries Development, Mozambique. Rome: FAO, Forestry Dept. (1980), 37 pages. Multiple use of natural resources in the Marrameu complex, Mozambique, with special reference to wildlife.

1626. 56 IIIA1 BLUDOVSKY Z. Multiple Use Management of Forests in the CSSR. Proceedings of the Meeting of Experts on Economic Valuation of Useful Functions of the Forest. Permanent Commission on Agriculture, Comecon, Forest Research Institute, Jiloviste - Strnady, CSSR (1979) In Czech. 9 pages.
Taken from: Outdoor Recreation Economics: Methods of Valuing Recreation Resources. Bibliography on recreation economics, sponsored by IUFRO and George Washington Univ., Dept. of Human Kinetics and Leisure Studies (1981). The productive functions of the forest and its non-wood benefits cannot be set one against the other. Economic valuation of non-wood benefits must be based on Marx theory of value as social work. Monetary appraisal of social functions of the forest meets so far with numerous obstacles, yet further search for methods and their improvement are necessary.

1627. 56 IIIA1 BOYCE STEPHEN G. Management of Forests for Optimal Benefits (Dynast-OB). USDA Forest Service Research Paper SE-204 (1980), 92 pages. New process can assist forest management to provide selected optimal forest benefits in perpetuity. A system dynamics technique, DYNAST-OB, is the mechanical method for quantifying and interrelating different kinds of forest benefits. This model has the capacity to integrate management strategy and tactics for a complex forest area divided into types or categories.

1628. 56 IIIA1 CHANG SUN JOSEPH, BUONGIORNO JOSEPH "A Programming Model for Multiple Use Forestry." Journal of Environmental Management, Vol. 13, No. 1 (1981), pages 41-54. A methodology of resource allocation combining goal programming and input-output analysis to provide a solution to the problem of multiple use planning on public forests. The model allows managers to specify the exact goal level for each management activity, to experiment with varying degrees of management intensity, to explore the outcome of different management priority assignments, and to determine the trade-off between management activities.

1629. 56 IIIA1 COLE GENE F., MEGAHAN WALTER F. "South Fork Salmon River - Future Management." In, Symposium on Watershed Management, Vol. I. Am. Soc. Civ. Eng., NY. (1980), pages 396-405. A new Land Management Plan was implemented in 1978 for the South Fork Salmon River Planning Unit in Central Idaho. Watershed management considerations and their integration into management decisions are outlined and a monitoring program described.

1630. 56 IIIA1 DUBOURDIEU J. "The Forest: Its Functions and Management." Comptes Redus des Séances de l'Académie d'Agriculture de France. Vol. 66, No. 6 . (1980). In French. Pages 595-613. Cited in Forestry Abstracts, Vol. 42, No. 6. Functions of mountain forests as protection for crops and houses, against avalanches, rainstorms and erosion, as areas of recreation, and as timber producers.

1631. 56 IIIA1 FRIEND GORDON R. "Wildlife Conservation and Softwood Forestry in Australia: Some Considerations." Australian Forestry, Vol. 43, No. 4 (1980), pages 217-224. Conversion of large areas of eucalypt forest to exotic conifer plantations in south-eastern Australia has met with considerable criticism from those concerned with effects on wildlife. Consideration is given to the formulation of management policies for conifer plantations, commensurate with wildlife conservation.

1632. 56 IIIA1 SCHEIRING H., KAMMERLANDER H. "The Project of Neustift in the Stubai Valley - Performance of a Mountain Forest." Allgemeine Forstzeitung, Vienna, No. 6 (1981) In German. Pages 190-216. Special issue describing the results of a research project to scrutinize a mountain forest and possible improvements from political, economic, ecological and silvicultural aspects.

1633. 56 IIIA1 Forest Communities Practicing Shifting Cultivation: the Case Study of Bangladesh. FAO,Rome, Bangladesh Inst. of Development Studies, Dacca (1980), 165 pages.

1634. 56 IIIA2 Growing Christmas Trees in the Pacific Northwest. A Pacific Northwest Extension Publication PNW6 (1981), 23 pages. Topics covered: (1) Judging opportunities for a successful business, (2) Managing natural stands, (3) Managing plantations, (4) Protecting the trees, (5) Harvesting and marketing.

1635. 56 IIIA3 COMTE M.C. "Making Social Forestry Work." Ceres, Vol. 13, No. 2 (1980), pages 41-44. Cited in Forestry Abstracts Vol. 42, No. 5. UNDP/FAO project on the management and improvement of forest grazing ground in Morocco with emphasis on "silvapastoral management and community development."

1636. 56 IIIA3 FAIRFAX SALLY K. "Riding into a Different Sunset: the Sagebrush Rebellion." Journal of Forestry, Vol. 79, No. 8 (1981), pages 516-520, 582. Although the format and vocabulary of the Sagebrush Rebellion are familiar, the stakes include the full spectrum of western resources. Debate is occurring at a time when traditional foundations of conservation and management are seriously eroded.

1637. 56 IIIA3 KOSCO BARBARA H., BARTOLOME JAMES W. "Forest Grazing: Past and Future." Journal of Range Management, Vol. 34, No. 3 (1981), pages 248-251. Livestock have grazed western forests since the 1850's. Policy changes with the inception of government regulation and the end of the free open range brought profound changes in the livestock industry. With increasing demands for timber, recreation and wildlife, grazing began to decline in importance as a use of National Forest ranges. Yet, livestock grazing on forest range is critical to year long operations of the ranchers who use them. With proper management livestock can be increasingly important not only as meat and fiber producers, but as part of all land management on national ranges.

1638. 56 IIIA5A ANGELO M. "The Recreation Opportunity Spectrum - A Challenge to Canadian Foresters." The Forestry Chronicle, Vol. 57, No. 2 (1981), pages 55-56. Recreation managers in many parts of Canada have not provided the diversity people seek in recreational opportunities.

1639. 56 IIIA5A ESKELINEN OSSI "The Natural Enviornmental Welfare Factors of Forested Outdoor Recreation Area Pyynikki." Society of Forestry in Finland, Silva Fennica, Vol. 13, No. 2 (1979) In Finnish. Pages 146-151.
Taken from: Outdoor Recreation Economics: Methods of Valuing Recreation Resources. Bibliography on recreation economics, sponsored by IUFRO and George Washington Univ., Dept. of Human Kinetics and Leisure Studies (1981). Welfare factors of the natural environment are examined from the viewpoint of the social sciences. The welfare study is intended to bring natural and social sciences closer together.

1640. 56 IIIA5B PAPANEK FRANTISEK Research of the Recreational and Therapeutic Function of the Forest and Derivation of Management Principles for Applying These Functions. Partial Final Report. Forest Research Institute, Zvolen (1979) In Czech. 52 pages.

Taken from: Outdoor Recreation Economics: Methods of Valuing Recreation Resources. Bibliography on recreation economics, sponsored by IUFRO and George Washington Univ., Dept. of Human Kinetics and Leisure Studies (1981). The concept of opportunity cost, as proposed by Duerr and Vaux of the United States is used for the integration of the recreational function with other functions of the forest.

1641. 56 IIIA5D BUHYOFF GREGORY J., WILLIAMS STEPHEN B., KLEMPFRER W. DAVID "Gravity Model Formulation for an Extensive National Parkway Site." Environmental Management, Vol. 5, No. 3 (1981), pages 253-262. Two recreation use projection/demand models employing three variables (distance, alternative recreation sites, and population density) were developed to predict visitation to different areas of the Blue Ridge Parkway from various local origins. Derived model estimates indicate about one fourth of all Parkway visits in 1978 were one-day visits made by area residents.

1642. 56 IIIA5D LII YUH-MING Forest Recreation Demand: Analysis of Its Elements and Applications. Master's thesis, Dept. of Forestry, National Taiwan Univ. (1981) In Chinese with an English summary. 150 pages. Defines demand and suggests research methods for investigating visitors' behavior; analyzes the factors affecting demand; using questionnaires from several forest recreation areas in Taiwan, analyzes visitor information and tests forecasting methods.

1643. 56 IIIA5E CLARK ROGER N., STANKEY GEORGE H. "Determining the Acceptability of Recreational Impacts: An Application of the Outdoor Recreation Opportunity Spectrum." In, Recreational Impact on Wildlands, Conference Proceedings. Oct. 27-29, 1978, Seattle, WA (1979), pages 32-42. Impacts from recreational activities on wildlands are of increasing concern to resource managers and recreationists. The Outdoor Recreation Opportunity Spectrum is used to describe the role recreation impacts play in defining recreation opportunities. Noise is used as a case example.

1644. 56 IIIA5E CLOKE PAUL J., PARK CHRIS C. "Country Parks in National Parks: A Case Study of Craig-y-Nos in the Brecon Beacons, Wales." Journal of Environmental Management, Vol. 12, No. 2 (1981), pages 173-185. One of the multiple objectives of Craig-y-Nos Country Park is to attract recreational pressure away from an adjacent open moorland area where informal roadside recreation threatens the wilderness value. Results from this study have broad implications for planning and management in National Parks.

1645. 56 IIIA5E CROSSEN T.I. "A New Concept in Park Design and Management." Biological Conservation, Vol. 15, No. 2 (cited in Forestry Abstracts Vol. 42, No. 3). (1979), pages 105-125. A Native Flora Park on the eastern boundary of Adelaide, Australia serves both the state and local urban population. Three main areas: native flower garden with associated nursery, woodland area for general recreation, and wilderness area with restricted public access; includes management methods for each area.

1646. 56 IIIA5E DU SAUSSAY CHRISTIAN "Transfrontier Parks." Unasylva, Vol. 32, No. 127. (1980), pages 16-22. Many nature parks and reserves, especially in Europe and Africa are in frontier zones. These zones are not only ideal areas for parks but can, by their position, promote international cooperation.

1647. 56 IIIA5E GULDIN RICHARD W. "Predicting Costs of Eastern National Forest Wildernesses." Journal of Leisure Research, Vol. 13, No. 2 (1981), pages 112-128. Method for estimating total direct social costs of proposed wilderness areas. A cost framework is constructed, equations developed for the cost components, and total social costs estimated for a proposed eastern wilderness to illustrate the study's method.

1648. 56 IIIA5E GULDIN RICHARD WILLIAM "An Economic Model of the Costs of Wilderness Management Incurred by the United States Forest Service." Ph.D. dissertation, Yale University. (1979) Available through University Microfilms International.

1649. 56 IIIA5E JENSEN MARVIN O. "Backcountry Managers Need Social Science Information." In, USDA Forest Service General Technical Report NC-63 (1981), pages 52-55. Information from social scientists is critical to setting social capacities for backcountry or wilderness areas of the National Park System so that those areas will provide the opportunity for high quality visitor experience.

1650. 56 IIIA5E MCAVOY LEO H., DUSTIN DANIEL L. "'The Right to Risk in Wilderness' - a Rejoinder." Journal of Forestry, Vol. 79, No. 5 (1981), page 284. Response to comments on their article, "The Right to Risk in Wilderness" Journal of Forestry, Vol. 79, No. 3.

1651. 56 IIIA5E OLTREMARI J., PAREDES G., SCHLEGEL Alternatives for Delimiting the National Puyehue Park. Informe de Convenio No. 27, Facultad de Ingenieria Forestral, Universidad Austral de Chile. (1980) In Spanish. 96 pages.
Taken from: Outdoor Recreation Economics: Methods of Valuing Recreation Resources. Bibliography on recreation economics, sponsored by IUFRO and George Washington Univ., Dept. of Human Kinetics and Leisure Studies (1981). This study discusses natural resources of the park and land ownership in order to identify criteria for evaluation for different sectors of this study area. Three boundary alternatives are presented based on values obtained for each partial sector. Variables utilized were: ecological diversity, genetic bank, hydrology, possibilities for research interpretation, recreation, and land ownership problems.

1652. 56 IIIA5E SCHREYER RICHARD, ROGGENBUCK JOSEPH W. "Visitor Images of National Parks: The Influence of Social Definitions of Places on Perceptions and Behavior." In, USDA Forest Service General Technical Report NC-63, Some Recent Products of River Recreation Research. (1981), pages 39-44. Recreation participation often depends upon a specific setting, which may represent a key aspect of the recreation experience. Some environments may appear generalized in the mind of the user, others may be strongly imbued with meaning. As images held by participants may affect their behaviors, their satisfaction, and their potential to conflict with others, it is valuable to understand the nature of such images.

1653. 56 IIIA5E STRONG DOUGLAS H. "Preservation Efforts at Lake Tahoe 1880 to 1980." Journal of Forest History, Vol. 25, No. 2 (1981), pages 78-97. While the Lake Tahoe Basin is not a national park, more than 70 percent of the land within the Basin has been preserved in national forests and state parks.

1654. 56 IIIA5G DEARDEN PHILIP "Landscape Evaluation: the Case for a Multi-Dimensional Approach." Journal of Environmental Management, Vol. 13, No. 1 (1981), pages 95-105. Discusses three major issues within the field of landscape evaluation that have recently been questioned as a basis for advancing a subjective theory of landscape appraisal.

1655. 56 IIIA5G PELT VAN J. "Landscape Analysis and Design for Conifer Plantations." Australian Forestry, Vol. 43, No. 3 (1980), pages 178-188. Plantations can be an asset to the landscape values of a region. Proper landscape planning is an integral part of the plantation planning process.

1656. 56 IIIA5G SCHROEDER HERBERT, DANIEL TERRY C. "Progress in Predicting the Perceived Scenic Beauty of Forest Landscapes." Forest Science, Vol. 27, No. 1 (1981), pages 71-80. Statistical models developed for predicting perceived scenic beauty of ponderosa pine forest landscapes using forest inventory data collected in the field, successfully predicted esthetic preferences for forest landscapes with a variety of different physical characteristics, and are consistent with past research and with intuitive expectations about scenic effects of various forest features.

1657. 56 IIIA5H PARSONS DAVID J., STOHLGREN THOMAS J., FODOR PAUL A. "Establishing Backcountry Use Quotas: An Example from Mineral King, California." Environmental Management, Vol. 5, No. 4 (1981), pages 335-340. Increasing levels of visitor use and consequent resource damage made backcountry use restrictions necessary in the Mineral King area of Sequoia National Park, California. Development of a trailhead quota system is described.

1658. 56 IIIA5H ROGGENBUCK JOSEPH W., BERRIER DEBORAH L. "Communications to Disperse Wilderness Campers." Journal of Forestry, Vol. 79, No. 3 (1981), pages 295-297. In the Shining Rock Wilderness, North Carolina, distributing a brochure from leaflet boxes located at major trailheads and distributing it through personal contact inside the wilderness were effective in moving campers from a congested area to lightly used sites.

1659. 56 IIIA5H SCHLESSMANN H. "Horseback-Riding in Forests - a Difficult Ride." Allgemeine Forstzeitschrift, Munich, No. 25 (1981) In German. Pages 620-622, 630. Compares legal aspects and questions of compensation for damages by horseback-riding in the states of Germany.

1660. 56 IIIA5H SHECHTER MORDECHAI, LUCAS ROBERT C. "Validating a Large Scale Simulation Model of Wilderness Recreational Travel." Interfaces, Vol. 10 No. 5 (1980), pages 11-18. A large-scale

simulation model of the use of outdoor recreation areas, especially ones with dispersed recreation patterns, has been developed that provides a means for experimenting with modifications of use or area conditions to determine effects on use patterns and congestion.

1661. 56 IIIA5I FIGHT ROGER D. Planners Guide for Estimating Cost Per User-Day of Proposed Recreational Facilities. USDA Forest Service General Technical Report PNW-110 (1980), 10 pages.

1662. 56 IIIA5I KAISER H. FRED, MARCHETTA JOANNE S. Outdoor Recreation Economics: Methods of Valuing Recreation Resources. The George Washington University, Department of Human Kinetics and Leisure Studies. (1981), 151 pages. A bibliography of current research on the economics of outdoor recreation as it relates to forestry. Research from 30 nations has been included.

1663. 56 IIIA7 BOZON M., CHAMBOREDON J.C., FABIANI J.L. "Social Habits in the Natural Environment. Social Elaboration and Conflicting Types of Consumption in the Countryside - The Example of Hunting." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 273-278.

1664. 56 IIIA7 GOULD NORMAN E. "U.S. Timber Needs and Prospects for Bird Habitats." In, Workshop Proceedings: Management of Western Forests and Grasslands for Nongame Birds. USDA Forest Service General Technical Report INT-86. (1980), pages 295-301. Western national forests will be expected to produce about 11 billion board feet of timber annually by the year 2000. Adequate assessment of the impacts of timber harvesting on nongame bird habitats in the West and evaluation of the prospects for those habitats is dependent on establishment of reasonable bird species, population, and distribution objectives supported by benefit/cost analyses, population and habitat inventories, and descriptions of the life-cycle.

1665. 56 IIIA7 SALWASSER HAL, CAPP JOHN C., BLACK HUGH JR., HURLEY JANET F. "The California Wildlife Habitat Relationships Program: An Overview." In, Workshop Proceedings: Management of Western Forests and Grasslands for Nongame Birds. USDA Forest Service General Technical Report INT-86. (1980), pages 369-378. The Calif. Wildlife Habitat Relationship Program is needed to meet the requirements of laws, policies, and regulations and to foster a land ethic in wildland resource management.

1666. 56 IIIA7 STUBBLEFIELD TED C. "Bird Management - Effects on Timber Management." In, Workshop Proceedings: Management of Western Forests and Grasslands for Nongame Birds. USDA Forest Service General Technical Report INT-86. (1980), pages 302-310. Proper analysis of the reciprocal effects of bird management and timber management requires a basic understanding of the individual resource complexities and acknowledgement of individual resource values. Effects should be estimated over time and on a site-specific basis to adequately reflect a most probable measure of their impact. In timber sale project planning, the timeliness of this input to the analysis process is generally critical to the quality of the end product.

1667. 56 IIIA8 AMES R.G. "Urban Tree Planting Programs: a Sociological Perspective." HortScience, Vol. 15, No. 2 (1980), pages 135-137. Cited in Forestry Abstracts Vol. 42 No. 5. Sociological advantages, funding and organization, using an Oakland, California program as example.

1668. 56 IIIA8 BEATTY RUSSELL A. "Planning the Urban Forest." Landscape Architecture, Vol. 71, No. 4 (1981), pages 456-458.

1669. 56 IIIA8 DRIVER B.L., ROSENTHAL DONALD "Social Benefits of Urban Forests and Related Green Spaces in Cities." In, Proceedings of the National Urban Forestry Conference, Vol. 1, No. 1. (Nov. 13-16, 1978), pages 98-113. Results of selected empirical studies of the social benefits of urban forests. Economic, physiological, and perceived benefits are analyzed with respect to their diversity and magnitude. Values of urban forests as a means of coping temporarily with undesirable urban conditions.

1670. 56 IIIA8 KAPLAN RACHEL Evaluation of a Vest-Pocket Park. USDA Forest Service Research Paper NC-195 (1981), 12 pages. Evaluates the effectiveness of a small park in downtown Ann Arbor, Michigan.

1671. 56 IIIB1 CIBULA E.J. "Future Timber Supply and Trade- A Review of Trends." Scottish Forestry, Vol. 35, No. 2 (1981), pages 109-115.

1672. 56 IIIB1 PHELPS ROBERT B. Timber in the United States Economy 1963, 1967, and 1972. USDA Forest Service General Technical Report WO-21 (1980), 90 pages. Timber management, harvesting, primary and secondary manufacturing, construction, transportation and marketing.

1673. 56 IIIB3 BOCHKOV I.M., SOKOLOVA E.G. "Determining the Optimum Amounts of Regeneration Measures in Forest Management Planning." Lesnoe Khozyaĭstvo, No. 1 (cited in Forestry Abstracts Vol. 42, No. 3). (1980). In Russian, pages 47-51. Mathematical model for determining optimum amounts and combinations of various regeneration measures (plantations, assistance to natural regeneration, natural regeneration, preservation of advance growth, and rehabilitation of stands) throughout a forest enterprise, taking into account both silvicultural and economic constraints.

1674. 56 IIIB3 RYABCHINSKIĬ A.E., POLOZHENTSEV I.P., ZOLOTOV S.A. "Cost Effectiveness in the Utilization and Renewal of Forests." Lesnoe Khozyaĭstvo No. 4 (1980) In Russian. Pages 29-30. Cited in Forestry Abstracts Vol. 42, No. 5. In order to evaluate the succession of species after felling in the Ufa region of eastern Russia, the coefficient of cost effectiveness was determined. Only spruce/fir stands are profitable with pure stands more cost effective than mixed stands.

1675. 56 IIIB3 WUNSCH JAMES S. "Renewable Resource Management, Decentralization and Localization in the Sahel: the Case of Afforestation." Paper presented at African Studies Association Annual Meeting for Panel on Renewable Natural Resources Management in the Sahel: the Issue of Popular Participation. (1980), 32 pages.

1676. 56 IIIB3 "Establishing Forest Stands in Highlands." Der Forst- und Holzwirt, Hannover, No. 12 (1981) In German. Pages 260-293. Reports from a meeting covering aspects of stand establishment, of soil preparation, tree selection, planting and seeding, and the applied techniques and machinery.

1677. 56 IIIB4 KNIGHT HERB, SHEFFIELD R.M. "Thinning Opportunities in Pine Plantations in the Southeast during the 1980's." In, Thinning Southern Pine Plantations: Integrating Economics and Biology. South. For. Econ. Workshop, Long Beach, Miss. (1980), pages 18-26. Thinnings during the 1980's could produce up to 2.8 million cords/year, 23 percent of the current annual roundwood pulpwood volume. This would represent a significant contribution to pulpwood production.

1678. 56 IIIB4 O'BRIEN D. "Economics of Spacing, Respacing and Thinning." In, Growing Space in Coniferous Crops - Supplement to Irish Forestry, Vol. 37, No. 2. (1980), pages 77-96. For the two prices assumed, lower crop densities than those now practiced lead to greater profitability if wood quality is not drastically reduced. There is a need for detailed examination of the relationship between silvicultural treatment and wood quality.

1679. 56 IIIB4 PHILLIPS J.C.L. "Some Effects of a No-Thinning Regime on Forest Management." In, Growing Space in Coniferous Crops - Supplement to Irish Forestry, Vol. 37, No. 2 (1980), pages 33-44. The Northern Ireland Forest Service has adopted a no-thinning policy for Sitka spruce on most areas of peat and gley soils due to experience of early windthrow following thinning both in Northern Ireland and elsewhere on such sites. Justification for this decision and its effects on production timing, employment, road construction, recreation, conservation, landscape values and the work of the forester.

1680. 56 IIIB4 VASIEVICH J. MICHAEL "Timber Stand Improvement - A Method for Determining Profitability." In, Proceedings of the Eighth Annual Hardwood Symp., Asheville, NC (1980), pages 100-117.

1681. 56 IIIB5 DAVAR ZAL, RUNYON K.L. Economic Analysis of Three Silvicultural Systems Used in the Management of Tolerant Hardwoods in Nova Scotia. Canadian Forestry Service Dept. of the Environment, Information Report M-X-107. (1980). In English with English and French abstracts. 22 pages. Two variations of clearcutting, strip cutting, and shelterwood cutting are compared. Net present value (NPV) is used to compare results, however, nonfinancial impacts such as wildlife, water, and aesthetics are identified for each system.

1682. 56 IIIB5 SINITSYN S.G. "Economic Achievement of the Principle of Sustained Yield." Lesnoe Khozyaĭstvo, No. 1 (cited in Forestry Abstracts Vol. 42, No. 3). (1980). In Russian. Pages 43-47. Legal basis of the principle of sustained yield in forestry in the USSR and the application of the principle in perpetuity. Changes in utilization in areas with mature stands and in areas with young stands are illustrated with diagrams. Practical conclusions are drawn regarding strategy and tactics of forest management.

1683. 56 IIIB5 VON GADOW K. "The Principle of Sustension in Forestry Planning." South African Forestry Journal, No. 114. (1980), pages 25-28. The principle of sustained yield (sustension) is an essential concept in forestry planning. Traditional "permissible felling volume" is not a very practical criterion for yield planning from plantations. When the result of alternative felling strategies can be predicted, it is more practical to determine a desirable felling volume with the aid of simulation.

1684. 56 IIIC GUNDERMANN E. "The Impact of Forest-Road Construction in High Mountains on Forest Recreation and Landscape Scenery." Forstwissenschaftliches Centralblatt, Vol. 100, No. 2 (1981) In German with an English summary. Pages 65-75. A method is developed to evaluate forest roads, planned or existing, on their cost-benefit aspects as well as their impacts on forest recreation and landscape scenery.

1685. 56 IIID1 PYNE STEPHEN J. "Fire Policy and Fire Research in the U.S. Forest Service." Journal of Forestry, Vol. 25, No. 2 (1981), pages 64-77.

1686. 56 IIID1 TRAIMOND B. "Fire in the Heather, or Burning as a Fact of Sociology." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 333-343.

1687. 56 IIID3 HERRICK OWEN W. "Forest Pest Management Economics - Application to the Cypsy Moth." Forest Science, Vol. 27, No. 1 (1981), pages 128-138. Management costs should be balanced against the reduction of impact caused by forest pest infestation. An adaptation of least-cost-plus-loss economic theory, using gypsy moth control, illustrates incremental analysis of impacts and costs as one way to pursue maximum effectiveness in forest pest management investment.

1688. 56 IIID3 WEIDHAAS JOHN A. JR. "The Problem with Insects is People." Journal of Arboriculture, Vol. 7, No. 5. (1981), pages 117-122. The public is increasingly involved in more rapid spread of insects, the decision-making process in insect control programs and regulations of pest control activities. Arborists need to be concerned with "people" problems as well as insect problems.

1689. 56 IIID4 JACOBI W.R., COWLING E.B., COST N.D. "Disease Losses in North Carolina Forests: III. Rationale and Recommendations for Future Cooperative Survey Efforts." Plant Disease, Vol. 64, No. 6 (1980), pages 579-581. Cooperative effort by university, state, federal, and Renewable Resources Evaluation (RRE) personnel provided the first objective estimates of damage to North Carolina forests since 1952. Advantages and limitations of using RRE data for estimates of disease losses and recommendations for a regionwide cooperative program to improve disease loss assessments in the southeastern United States.

1690. 56 IIIE BOYER WILLIAM D., FARRAR ROBERT M. "Thirty Years of Management on a Small Longleaf Pine Forest." Southern Journal of Applied Forestry, Vol. 5, No. 2 (1981), pages 73-77. A management demonstration in an understocked 40-acre tract of

second-growth longleaf pine forest in south Alabama was begun in 1948. Although periodic harvests removed 3,833 board feet per acre, standing volume after 30 years of management has increased to 5,408 board feet per acre. Management costs have been minor.

1691. 56 IIIE DENIZET A. "The Need for a More Efficient Reorganization of Forest Management." Revue Forestière Française, Vol. 32, No. 5 (1980) In French, pages 467-471.

1692. 56 IIIE GUNDERMANN E. "Selected Methods of Identifying and Evaluating Goals and Their Application in Forestry." Forstarchiv Hannover, No. 2 (1981) In German with an English abstract. Pages 51-57. Methods like brainstorming, Delphi-technique, utility analysis, and others are not very common in forestry but an increased application of these methods is to be expected in future.

1693. 56 IIIE HANN DAVID W. Development and Evaluation of an Even- and Uneven-Aged Ponderosa Pine/Arizona Fescue Stand Simulator. USDA Forest Service Research Paper INT-267 (1980), 95 pages. Construction and validation of a simulator for predicting even-aged and uneven-aged stand development for the ponderosa pine/Arizona fescue habitat type of the Southwest. Resulting simulator characterizes the stand by the number of trees in one inch diameter classes for two vigor components of the stand. Stand dynamics are represented by models for predicting upgrowth, mortality, vigor class conversion, and ingrowth.

1694. 56 IIIE HELLMAN O. "A Special Problem of Large Scale Forest Management." European Journal of Operational Research, Vol. 4, No. 1 (1980), pages 16-18. Cited in Forestry Abstracts Vol. 42, No. 5. Theoretical model for managing a large forest, based on the assumption that a group of pulp mills would be built and the forest managed solely to supply them through a single log depot, under a system of mechanical harvesting followed by immediate replanting.

1695. 56 IIIE RIVAILLON P. "Simple Management Plans in Private Forestry." Revue Forestière Française, Vol. 32, No. 4 (1980). In French, pages 385-388.

1696. 56 IIIE ROSE DIETMAR, FERGUSON KAREN, LOTHNER DAVID C., ZAVITKOVSKI J. An Economic and Energy Analysis of Poplar Intensive Cultures in the Lake States. USDA Forest Service Research Paper NC-196 (1981), 44 pages. Short- (5 to 10 years) and long- (15 years) rotation, irrigated and nonirrigated intensive cultures of hybrid poplar were analyzed economically via cash flow analysis. Energy balances were also calculated for each alternative.

1697. 56 IIIE SOARES BARRETO L. "Natural Resources Management Decision Methods for Multiple Use Objective Problems." Centro de Estudos Florestais, Lisboa (1979) In Portuguese. 25 pages. Taken from: Outdoor Recreation Economics: Methods of Valuing Recreation Resources. Bibliography on recreation economics, sponsored by IUFRO and George Washington Univ., Dept. of Human Kinetics and Leisure Studies (1981). Emphasis of growing importance in local and national forest planning of correct selection between different management alternatives. Multiple use

objective is equally as, or more important than the wood production objective in forest management decisions. Multi-criteria analysis, goal programming, utility functions, and interactive multi-objective linear programming approaches are used.

1698. 56 IVA1A FAO Commodity Review and Outlook, 1980-1981. Rome: FAO Economic and Social Development Series. (1980), pages 98-104. Level of production of roundwood, sawnwood and panel products increased slightly in 1979. Growth in pulp and paper production was stronger. Trade in all products expanded more than production. Outlook for 1981 is for recovery in the United States' housing sector but uncertain economic growth prospects in other major importing countries do not encourage the expectation of expansion in production and trade.

1699. 56 IVA1A Yearbook of Forest Products, 1979. Rome: FAO (1981). In English, French and Spanish. 430 pages.

1700. 56 IVA1B BERTELSON DANIEL F. Arkansas Forest Industries, 1977. USDA Forest Service Resource Bulletin SO-75. (1980), 18 pages. Analysis of total production of softwood and hardwood output by county in Arkansas during 1977.

1701. 56 IVA1B FICKEN R.F. Lumber and Politics: The Career of Mark E. Reed. Seattle: Univ. of Washington Press (1980), 276 pages. Cited in Forestry Abstracts, Vol. 42, No. 6. Biography and account of the development and growth of the timber industry of the Pacific Northwest from the turn of the century to the 1930s.

1702. 56 IVA1B MOSES THOMAS CLIFFORD "An Institutional and Economic Analysis of the Arizona Timber Industry." Ph.D. dissertation, The University of Arizona. (1981) Available through University Microfilms International.

1703. 56 IVA1B NEVEL ROBERT L. JR., REDETT ROBERT B. Ohio Timber Industries - A Periodic Assessment of Timber Output. USDA Forest Service Resource Bulletin NF-64 (1980), 33 pages. Results of a survey of the timber industries of Ohio containing statistics on industrial timber production and receipts, and production and disposition of the manufacturing residues. Comparisons with the most recent survey and trends in industrial wood output are noted.

1704. 56 IVA1C DEMARD J.C. "The Use of Wood in the Peasant and Artisan Traditions of Franche-Comté." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 281-300.

1705. 56 IVA1C HEUZÉ G. "Financing the Timber Industry. The Example of the Vosges Department." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981) In French. Pages 102-114.

1706. 56 IVA1C MÉO J. "Some Thoughts on the Timber Industry." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 368-373.

1707. 56 IVA1C PRIVAL M. "Two Forest Crafts: Pit Sawing and Clog Making." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 301-303.

1708. 56 IVA1C WAHLROOS BJÖRN The Economics of the Finnish Industrial Structure: an Empirical Analysis of Industrial Concentration, Conduct and Performance in Finland in the Seventies. Study Report of the Swedish School of Economics in Finland, IV. Helsinki. (1980), 215 pages.

1709. 56 IVA1E PHILLIPS F.H., GARLAND S.B. "Paper in South-East Asia." Appita, Vol. 34, No. 5 (1981), pages 348-357. Size and status of existing pulp and paper industry, consumer demand and import situation in various countries in South-East Asia. Extent of forest resources in the region is outlined as a guide to possible future development.

1710. 56 IVA3 BAUER E. "International History of Timber Utilization." Der Forst- und Holzwirt, Hannover, No. 11 (1981) In German. Pages 241-244. Survey of timber utilization from 10,000 B.C. on.

1711. 56 IVA4 ELLISOR JIM "Log Inventory Controls." Oregon State University School of Business, Studies in Management and Accounting for the Forest Products Industries. (1981), 8 pages.

1712. 56 IVB3 TUNÁK ŠTEFAN "Contribution to the Solution of Problems in the Comprehensive Utilization of Wood." Lesnícky Časopis, Vol. 27, No. 1 (1981). In Czech with an English summary. Pages 75-80. Growing demand for wood makes it necessary to utilize logging and industrial wood residues. In 1970 secondary wood sources represented about 74 percent of recorded fellings.

1713. 56 IVB3A WHARTON ERIC H., BONES JAMES T. Trends in Timber Use and Product Recovery in Pennsylvania, 1966-1977. USDA Forest Service Research Note NE-297 (1980), 4 pages. Repeated timber utilization studies in Pennsylvania suggest that the recovery of growing-stock timber has improved over the years. Currently 95 percent of the inventory growing-stock volume is being recovered from harvested trees. There are many opportunities to recover additional amounts of biomass from nongrowing-stock trees and logging residues. Until recently, these operations were regarded as unprofitable.

1714. 56 IVC1A HUTTUNEN T. "Small Sawmills in Finland, 1980." Folia Forestalia, 457 (1981) In Finnish with an English summary. 15 pages. Results of a 1980 investigation: number of mills, their roundwood consumption, production of sawn timber and wood residues and their distribution by different uses, estimates of sawmill activities for the year 1979 and 1981.

1715. 56 IVC1D WENGERT EUGENE M., DONNELLY DENNIS M. Lumber Yield Potential of Aspen in the Rocky Mountains. USDA Forest Service Research Paper RM-227 (1980), 7 pages. The yield of sawn products from aspen trees from northern New Mexico and eastern Utah, both in terms of volume and dollar value, is related to trial tree and log grades. Trial grading systems generally allow separation of

trees and logs into different levels of volume and dollar value recovery.

1716. 56 IVC2A BAYLISS MARTIN, HAAS LEONARD, REID SUSAN "World Review of Pulp and Paper Industry." Pulp and Paper, Vol. 55, No. 8 (1981), pages 66-75. Worldwide output of pulp/paper was at new high, but Europe and Japan suffered with mill closures; tight pulp market, higher price forecast.

1717. 56 IVC2A WALLACE ARTHUR "Prerecession Conditions to Aid in Quick Recovery for Paper, Board." Pulp and Paper, Vol. 55, No. 6 (1981), pages 132-135. U.S. paper, paperboard industry will perform well during next two years despite some short-term weakness.

1718. 56 IVC2A Estimated Production of Pulp, Paper and Paperboard in Certain Countries in 1980. FAO Advisory Committee on Pulp and Paper, 22nd Session - Rome (1981), 33 pages.

1719. 56 IVC2A Pulp and Paper Capacities, 1980-1985. FAO (1981) In English, French and Spanish. 259 pages.

1720. 56 IVC2A "Paper '81, Efficiency Report of German Pulp and Paper Industry." Verband Deutscher Papierfabriken e.V., Bonn (1981) In German. 72 pages. An annual publication describing status and trends in the pulp and paper industry with numerous statistical data.

1721. 56 IVC2B BUONGIORNO JOSEPH, STIER JEFFREY C., GILLESS JAMES K. "Economies of Plant and Firm Size in the United States Pulp and Paper Industries." Wood and Fiber, Vol. 13, No. 2 (1981), pages 102-114. Statistics from the U.S. Bureau of the Census were analyzed with respect to labor productivity and profitability for evidence of economies of scale. In the pulp industry, profitability and productivity appear to decrease sharply for mills with more than 500 employees. For paper and paperboard, productivity and profitability tend to level off or decline only slightly in mills with more than 500 employees. Only in the small building paper and paperboard industry did the largest mills exhibit the highest productivity.

1722. 56 IVC2C BELLAMY THOMAS R., HUTCHINS CECIL C. JR. Southern Pulpwood Production, 1979. USDA Forest Service Resource Bulletin SE-57. (1981), 22 pages. Pulpwood production in the South rose 7 percent in 1979 to 54 million cords. Of the increase, 55 percent was from roundwood and 45 percent from plant byproducts. Pulping capacity of the 115 mills in the South rose 7 percent to over 110,000 tons per day.

1723. 56 IVC3A BOOTH HARRY "Asia's Wood-Based Panels Industry and Trade." Unasylva, Vol. 32, No. 127. (1980), pages 2-7. Current situation and what should be done in view of raw material constraints, costlier energy and shipping and the implications of new technologies.

1724. 56 IVC3A STONE ROBERT N., MCSWAIN GEORGE A. "Wood-Based Panel Products, A Changing Industry in the United States." Unasylva, Vol. 32, No. 127. (1980), pages 8-15.

1725. 56 IVC7 UEDA MICHIHIKO, DARR DAVID R. The Outlook for Housing in Japan to the Year 2000. USDA Forest Service Research Paper PNW-276. (1980), 25 pages. Housing demand in Japan is analyzed in terms of new household formations, vacancies, and replacements of housing stock. Total number of starts is projected to stay near current levels or decline, depending on assumptions about replacement demands. This contrasts with rapid growth in number of starts during the 1960's and early 1970's.

1726. 56 IVC8 BURLEY JEFFERY "Obstacles to Tree Planting for Wood Fuel in Arid and Semi-Arid Lands with Particular Reference to India and Kenya." The International Tree Crops Journal, Vol. 1, No. 2/3 (1980). In English with French and Spanish abstracts, pages 147-161. Major constraints to tree planting in arid and semi-arid lands are: land use and tenure problems, community organization, lack of monetarized economy, poor transport and marketing systems, and poor understanding of long-term cost-benefit appraisal.

1727. 56 IVC8 PAAVILA H.D. "Energy Utilization- Yesterday, Today and Tomorrow." Pulp and Paper Canada, Vol. 82, No. 2. (1981), pages 63, 65, 67, 69. Canadian pulp and paper industry expects a 30 percent improvement in its purchased energy use efficiency by 1984.

1728. 56 IVC8 SILVERSIDES C.R. "Mill and Forest Residues as Fuel." Pulp and Paper Canada, Vol. 82, No. 3. (1981), pages 57-59, 61. With the continuing rise in fossil fuel prices, the return on investment through biomass use can be worthwhile.

1729. 56 IVC8 SINGH ASHBINDU "Wood as a Source of Energy for Rural Communities." The Indian Forester, Vol. 107, No. 2 (1981), pages 115-123. The energy budget of rural Indian households is heavily dependent on traditional and noncommercial sources of energy with no viable alternative to firewood as a source of basic energy for people at the subsistence level. The country must adopt suitable energy policy and promote community forestry programs for establishing village fuelwood forests.

1730. 56 IVC8 WARDLE P.A., PONTECORVI F. Special Enquiry on Fuelwood and Charcoal. Rome: FAO, Forestry Statistics and Economic Analysis Unit. (1981), 23 pages.

1731. 56 IVC8 WOOD DENNIS H., BROKENSHA D., CASTRO A.P., GAMSER M., JACKSON B., RILEY B.,SCHRAFT D. The Socio-Economic Context of Fuelwood Use in Small Rural Communities. Washington, D.C., U.S. Agency for International Development, AID Evaluation Special Study No. 1 (1980), 293 pages.

1732. 56 IVC8 The University of Kansas Energy Forest, Final Report to the Ozarks Regional Commission. Dept. of Forestry, Kansas State Univ. Document No. 1061-0050 (1980), 74 pages. Determining the feasibility of wood fuel as a solution to the peak-load needs of a solid-waste steam generating plant for the Lawrence campus.

1733. 56 IVC8 "Energy from Wood." Allgemeine Forstzeitung, Vienna, No. 7 (1981) In German. Pages 231-259. Reports from a meeting in Ossiach about wood energy, fueling systems, and utilization of wood residues.

1734. 56 IVC9 GUYOT F. "The Barrel-Stave Makers of Limousin." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 304-309.

1735. 56 IVC9 STEWART PETER C. "The Shingle and Lumber Industries in the Great Dismal." Journal of Forest History, Vol. 25, No. 2 (1981), pages 98-107.

1736. 56 VA1 HUTTUNEN T. "Wood Consumption, Total Drain and Forest Balance in Finland, 1978-80." Folia Forestalia, 465 (1981) In Finnish with an English summary. 47 pages. Part of a series of annual wood consumption statistics published by the Finnish Forest Research Institute since 1964. Final statements concerning wood consumption, total drain and forest balance in Finland for 1978 and 1979 including preliminary estimate for 1980. Time series are included for the period 1960 to the present.

1737. 56 VB1 BYRON R.N. "Trans-Tasman Trade in Forest Products - Past and Future." Australian Forestry, Vol. 43, No. 3 (1980), pages 195-202. Australia's export prospects are not independent of developments in the production and marketing of forest products in New Zealand. Over the longer term relative changes in economic variables such as exchange rates, wage levels and rates of inflation are also likely to influence Australia's export prospects. Ideas are presented on the impacts of moves towards closer economic cooperation between New Zealand and Australia and on the potential for rationalized developments in certain forest commodities.

1738. 56 VB1 MANNING G.H., MACKLIN C.J. Waterborne Exports of Forest Products from British Columbia Ports 1985 and 1990. Canadian Forestry Service Pacific Forest Research Center (1980), 11 pages. Resource availability is changing in British Columbia's six coastal zones. World forest products demands from these zones are derived and compared with resource availability, and growth in shipments to 1990 estimated.

1739. 56 VB1 NOEL G. Development and Prospects of Trade in (tropical) African Forest Products. Forest Industries Advisory Group for Africa. Rome: FAO, Forestry Dept. (1980), 28 pages.

1740. 56 VB1 ROCHOT A. "A Deficit in the Balance of Trade: Wood and Wood Products, in Spite of Our Extensive Forest Resources." Revue Forestière Française, Special Number 1980, Society and Forests, Vol. 32 (1981). In French, pages 92-95.

1741. 56 VB3 JACKSON BEN DOUGLAS "An Economic Analysis of the Long-Run Timber Market in East Texas." Ph.D. dissertation, Texas A&M University (1980) Available through University Microfilms International.

1742. 56 VB3 WISEMAN A. CLARK, SEDJO ROGER A. "Effects of an Export Embargo on Related Goods: Logs and Lumber." American Journal of Agricultural Economics, Vol. 63, No. 3 (1981), pages 423-429. A model is utilized to derive estimates of the market equilibrium, net welfare, and welfare incidence effects of a hypothetical embargo of softwood log exports from the Pacific Coast region of the United States. The approach is potentially applicable to the analysis of various restrictions on primary products exports which may be instituted to maintain the viability of domestic processing industries.

1743. 56 VB3 Concepts and Guidelines for the Utilization and Marketing of Tropical Timber in a Changing Supply and Demand Situation. Rome: FAO, Forestry Dept. Committee on Forest Development in the Tropics. (1980). In English, Spanish and French, 14 pages.

1744. 56 VB4 JOHNSON RONALS N., LIBECAP GARY D. "Efficient Markets and Great Lakes Timber: A Conservation Issue Reexamined." Explorations in Economic History, Vol. 17, No. 4 (1980), pages 372-385.

1745. 56 VB5A CLEPHANE THOMAS P., CARROLL JEANNE "U.S. Paper Industry Export Outlook Bright- Especially for Linerboard." Pulp and Paper, Vol. 55, No. 8 (1981), pages 175-178. New demand from China, high costs of production in Japan, capacity closures in Europe all add up to new export opportunities for U.S. linerboard mills.

1746. 56 VB5A OLIVER PETER "Bleached Kraft Pulp Market Forecast to Continue Strong through 1985." Pulp and Paper, Vol. 55, No. 5 (1981), pages 167-171. Evaluation of major factors affecting bleached pulp supply and demand to 1985 indicates prices should reflect fuel cost pass-through.

1747. 56 VB5B GUSTAFSSON KARL-FREDRIK "Market Pulp Supply from Sweden Will Remain Steady through the 1980s." Pulp and Paper, Vol. 55, No. 8 (1981), pages 147-149. With higher efficiencies and lower shipping costs than North American mills, Sweden is expected to remain competitive in the Europear market.

1748. 56 VB6 WU S.C., CHUNG D.H., LEU M.T. Studies of the Market and Production of Bamboo Products in Taiwan. Technical Bulletin No. 127, Experimental Forest of National Taiwan University R.O.C. (1981) In Chinese with an English summary. 50 pages. Classification and market situation of bamboo products. Working conditions of employees and recommendations for improving the bamboo industry.

1749. 56 VC1 Forest Products Prices, 1961-1980. Rome: FAO Statistics and Economic Analysis Unit, Forestry Dept. (1981). In English, French and Spanish, 113 pages.

1750. 56 VC2 HERRICK OWEN W., GANSNER DAVID A. Timber Prices in the Northern United States, 1978. USDA Forest Service Research Note NE-300 (1980), 8 pages. Sawtimber and cordwood prices (1978) and the range in price per unit from sales on nonindustrial private woodlands are reported for the Northern U.S.

1751. 56 VC2 HUTCHINS CECIL C. JR. Pulpwood Prices in the Southeast, 1979. USDA Forest Service Research Note SE-306 (1981), 3 pages. Expenditures for wood fiber in the Southeast during 1979 were $960.8 million, an increase of 8.7 percent over 1978. Prices per standard cord of roundwood pulpwood was $40.65 for softwood, a 12.1 percent increase, and $30.40 for hardwood, an increase of 8 percent. Green chip prices per ton averaged $17.15 for softwood and $13.05 for hardwood; they increased 7.9 and 8.8 percent, respectively. Softwood sawdust prices were up 22.8 percent, while hardwood prices were unchanged.

1752. 56 VC2 PELCNER JÚLIUS "Economic Analysis of the Rentability of Hardwood Timber and the Possibility of Improving the Formation of Timber." Lesnícky Časopis, Vol. 27, No. 2 (1981). In Czech with an English summary, pages 143-156.

SUBJECT INDEX

This index is best used in conjunction with the Subject-matter Classification Scheme at the front of this issue. For example, if the user enters the index at Administration, forest, he is referred to Section III of the bibliography, because to be more specific would require subdividing the topic essentially as the Classification Scheme does. The user's next step is to turn to the Scheme, where he finds that forest administration in general is IIIA1, administration pertaining to forest roads is IIIC, and so on.

Absenteeism, IIA4

Accounting (see Planning and plan)

Acreage (see Area)

Administration
  forest, III
  forestry program, IC
  personnel, IIA
  professional, subprofessional, IF

  research, IE

Advertising, V

Aesthetic values, IIIA5g

Afforestation, IIIB3

Africa
  forestry at large, IB5
  manufacturing, IVA1e
  (see also Union of South Africa)

Allowable cut, IIIB5

Alternatives
  genetic production, IIIE
  manufacturing, IVA4

Amenities (see Aesthetic values)

Appraisal (see Valuation)

Area
  forestry at large, IB
  land, IIC
  ownership, IIB
  policy, program, IC

Argentina
  forestry at large, IB4
  manufacturing, IVA1d

Asia
  forestry at large, IB5
  manufacturing, IVA1e
  (see also China; Japan; Taiwan; USSR)

Assessment (see Valuation)

Auction (see Market and marketing)

Australia
  forestry at large, IB4
  manufacturing, IVA1d

Balloon logging, IVB

Bark, IVC4
  demand, VA
  harvesting, IVB
  manufacturing, IVC4
  marketing, VB6
  price, VC3
  transportation
    harvesting, IVB4
    marketing, VD

Behavior of the individual, ID5

Board
building (see Pulp and paper)
compositon (see Composition board)
paper (see Pulp and paper)

Boards (see Lumber)

Bond, IID2

Box (see Lumber; Pulp and paper)

Brashing, IIIB4

Budget
forestry at large, IID1
genetic production, IIIE
manufacturing, IVA4

Building (see Construction)

Building board (see Pulp and paper)

Burning (see Fire)

Business
forestry at large, IB
genetic production, IIIE
manufacturing, IVA4
principles, IA

Buyer
commodity, VB
demand, VA
land, IIC3

Camping, IIIA5h

Canada
forestry at large, IB2
manufacturing, IVA1b

Canoeing, IIIA5h

Capital, IID
gain, ID1c
genetic production, IIIE
manufacturing, IVA4

Caribbean
forestry at large, IB5
manufacturing, IVA1e

Cellulose (see Pulp and paper)

Charcoal, IVC8
demand, VA
manufacturing, IVC8
marketing, VB6
price, VC3
transportation, VD

Chile
forestry at large, IB4
manufacturing, IVA1d

China
forestry at large, IB3
manufacturing, IVA1c

Chipboard (see Composition board)

Chipping (see Pulpwood and chips; Naval stores)

Chips (see Pulpwood and chips)

Christmas trees and greens, IIIA2
demand, VA
genetic production, IIIA2
marketing, VB7
price, VC3
transportation
harvesting, IVB4
marketing, VD

City forest (see Forest)

Collateral, IID2

Competition
forest use, IIIA1
land, IIC
market, VB
silviculture, IIIB

Composition board, IVC6
demand, VA
manufacturing, IVC6
marketing, VB4
price, VC3
transportation, VD

Conservation
land, IIC3
policy, IC
resource owner, IIB
saving, IID1
social interest, ID4

Construction, IVC7
demand, VA
manufacturing, IVC7
marketing, VB8
price, VC3

Consumer and consumption, VA

Continuing education, IF

Cooperative association
forestry at large, IIB
manufacturing, IV
marketing, VB

County forest (see Forest)

Credit, IID2

Crosstie, IVC9
demand, VA
logging, IVB
manufacturing, IVC9
marketing, VB6
price, VC3
transportation
logging, IVB4
marketing, VD

Cuba, IB5

Cultivation, shifting, IIIA1

Curriculum, IF

Custom, ID4

Cutting, IVB
cycle, harvest, IIIB5
intermediate, IIIB4

Data processing
genetic production, IIIE
manufacturing, IVA4

Debarking
harvesting, IVB3
manufacturing, IVC4

Decay, IIID4

Decision making (see Planning and plan)

Decorative product, IVD1
(see also Christmas trees and greens)

Demand, VA
capital, IID1
foreign trade, VB
labor, IIA1
land, IIC1
marketing, VB
professional, subprofessional, IF
recreation, IIIA5d

Depletion
income tax, ID1c
regional resources, IB

Depreciation, IVA4

Development
genetic production, III
principles, IA
regional
forestry at large, IB
manufacturing, IVA1
social, IG

Dimension (see Lumber)
stock (see Lumber)

Directory
wood industry, IVA2

Discount (see Capital)

Disease, IIID4

Distribution
land, IIC
market transportation, VD
marketing, VB
regional resources, IB

Driving
recreation, IIIA5h
river, IVB4

Earnings
capital, IID1
genetic production, IIIE
investment, IID1
labor, IIA3
managerial, ownership, IIB

manufacturing, IVA4
professional, subprofessional, IF
valuation, ID2

Economics, IA
(see also Development)

Education, IF
(see also Training)

Elasticity (see Demand; Supply)

Employment
labor, IIA1
professional, subprofessional, IF

Energy, IB
demand, VA
genetic production, IIIB
manufacturing, IVC8
marketing, VB8

Enterprise, IIB

Entrepreneur, IC
land planner, IIC3
owner, manager, IIB

Environmental concern, IH
(see also Aesthetics; Technology)

Erosion, IIIA6

Europe
forestry at large, IB3
manufacturing, IVA1c

Export, V

Farm forest (see Forest)

Fee
grazing, VC3
recreation, IIIA5d
simple
land tenure, IIC3
law, IC
ownership, IIB

Felling (see Cutting)

Fertilization, IIIB2

Fibreboard (see Composition board)

Finance (see Tax; Valuation; Insurance; Capital)

Fire
control, damage, loss, IIID1
prescribed, IIID2

Firewood, IVC8
demand, VA
logging, IVB
manufacturing, IVC8
marketing, VB6
price, VC3
transportation
logging, IVB4
marketing, VD

Fish, IIIA7
(see also Recreation)

Flakeboard, IVC6

Flood, IIIA6

Flooring (see Lumber)

Folklore, ID4

Forage (see Rangeland)

Forecasting and forecast
consumption, VA2
forestry at large, IB
genetic production, IIIE
manufacturing, IVA4
principles, IA

Forest, IB
conversion, IIIB
genetic production, III
land market, IIC3
owner, manager, IIB
policy, program, IC
product, minor, IVD4
urban, III[illegible]

Forest Service, IIB2

Forest Survey
finding (see Regional resources)
method
genetic production, IIIE
land, IIC4

Forester and forestry
owner, manager, IIB
policy, Program, IC
professional, subprofessional, IF
social characteristics, IA
urban, IIIA8

Freight (see Transportation)

Fringe benefit, IIA3

Fuelwood (see Firewood; Energy)

Fume damage, IIID4
(see also Environmental concern)

Furniture, IVC5
demand, VA
manufacturing, IVC5
marketing, VB6
price, VC3
transportation, VD

Futures, VB2

Genetic production, III
tree improvement, IIIB3

Goal
forest, IIIE
manufacturing, IVA4
regional or national consumption or production, VA2
society or economy, IA

Government
forest and forestry, IIB2
planning, VA2
policy, IC
tax, ID1

Grazing (see Rangeland)

Greens (see Christmas trees and greens)

Growing stock, IIIB5
(see also Area)

Growth, timber, IIIB
(see also Development)

Gum (see Naval stores)

Hardboard (see Comp. board)

Harvest
game, IIIA7
(see also recreation)
silvicultural aspect
cutting cycle, harvest cutting, IIIB5
intermediate cutting, IIB4
timber, IVB

Hauling (see Transportation)

Hedging, VB2

Hewn tie (see Crosstie)

Hiking, IIIA5h

History
consumption, VA1
forestry at large, IB
wood industry, IVA3

Horseback riding, IIIA5h

Housing (see Construction)

Human relations, ID4

Hunting, IIIA7

Ice damage, IIID4

Import, V

Incentive
forest owner, IIB3
genetic production, IIIE
labor, IIA3
manufacturing, IVA4
sulvicultural practice, IIIB

Industry
logging, IVB
wood manufacturing, IV

Information system (see Planning and plan)

Input-output
  genetic production, IIIE
  manufacturing, IVA4
  regional resources, IB

Insect, IIID3

Insulation board (see Comp. board)

Insurance
  accident, IIA4
  property, ID3

Integrated forestry, IIIA1
  land use, IIC

Interest (see Capital)
  (see also Social interest)

Inter-industry analysis (see input-output)

International trade, V

Inventory
  data (see Area)
  method
    genetic production, IIIE
    land, IIC4

Investment (see Capital)

Irrigation, IIIB2

Israel
  forestry at large, IB3
  manufacturing, IVA1c

Japan
  forestry at large, IB3
  manufacturing, IVA1c

Korea
  forestry at large, IB3
  manufacturing, IVA1C

Kraft (see Pulp and paper)

Labor, IIA
  (see also Forester and forestry)

Land, IIC
  (see also Owner and ownership)

Landscaping (see Aesthetics)

Latin America
  forestry at large, IB5
  manufacturing, IVA1e
  (see also Argentina; Chile)

Law
  forestry at large, IC
  land, IIC3

Lease (see Owner and ownership)

Legislative history
  forestry at large, IC
  land, IIC3

Leisure (see recreation)

Lieu payment, ID1b

Linear programming
  genetic production, IIIE
  manufacturing, IVA4

Livestock (see Rangeland)

Loading and unloading (see transportation)

Loan, IID2

Location theory, IA
  (see also Regional resources; Transportation)

Log (see Stumpage and log)

Logging (see Harvest)

Lumber, IVC1
  demand, VA
  manufacturing, IVC1
  marketing
    cash, VB4
    futures, VB2

price, VC3
transportation, VD

Management
forest, III
land, IIC
manufacturing, IV
multipurpose, IIIA1
personnel
labor, IIA
professional, sub-professional, IF
recreation, IIIA5c

Manager, IIB
policy, program, IC
(see also Management)

Manpower
labor, IIA
professional, subprofessional, IF

Maple product, IVD3
demand, VA
genetic production, IIIA4
manufacturing, IVD3
marketing, VB8
price, VC3
transportation
harvesting, IIIA4
marketing, VD

Mapping (see Location)

Market and marketing
commodity, V
labor, IIA
land, IIC3
recreation, IIA5d

Mexico
forestry at large, IB5
manufacturing, IVA1e

Millwork (see Lumber)

Mine timber, IVC9
demand, VA
logging, IVB
manufacturing, IVC9
marketing, VB6
price, VC3
transportation
logging, IVB4
marketing, VD

Mining
damage by (see Environmental concern)
wood used in (see Mine timber)

Minor forest product, IVD4

Mobile home (see Construction)

Model
genetic production, IIIE
manufacturing, IVA4

Multiple use
forest, IIIA1
land, IIC

Municipal forest (see Forest)

National forest (see Forest)

National park
owner, manager, IIB2b
policy, program, IC
(see also Recreation)

Nature study, IIA5h

Naval stores, IVD2
demand, VA
genetic production, IIIA4
manufacturing, IVD2
marketing, VB8
price, VC3
transportation
harvesting, IIIA4
marketing, VD

Near East
forestry at large, IB5
manufacturing, IVA1e
(see also Turkey, Israel)

Nepal
forestry at large, IB5
manufacturing, IVA1e

New Zealand
forestry at large, IB4
manufacturing, IVA1d

Newsprint (see Pulp and paper)

Noise abatement, IH
(see also Technology)

Nondeliberated decision, ID4

Operations research
genetic production, IIIE
manufacturing, IVA4

Outdoor recreation (see recreation)

Owner and ownership, IIB
land, IIC3
policy, program, IC

Pacific islands
forestry at large, IB5
manufacturing, IVA1e

Pallet (see Lumber)

Panel (see Composition board; Veneer and plywood)

Paper (see Pulp and paper)
board (see Pulp and paper)

Park, IIIA5e
owner, manager, IIB
policy, program, IC
urban forestry, IIIA8

Particleboard (see Composition board)

Personality, ID5

Personnel
labor, IIA
professional, subprofessional, IF

Pests, IIID

Picnicking, IIIA5h

Piling as a product, IVC9
demand, VA
logging, IVB
manufacturing, IVC9
marketing, VB6
price, VC3
transportation
logging, IVB4
marketing, VD

Piling as an operation
labor, IIA
manufacturing, IV

Pit prop (see Mine timber)

Planing mill (see Lumber)

Planning and plan
consumption or production goal, VA2
forestry at large, IC
genetic production, IIIE
land, IIC3
manufacturing, IVA4

Plantation and planting, IIIB3

Plastic (see Pulp and paper)

Plywood (see Veneer and plywood)

Pole, IVC9
demand, VA
logging, IVB
manufacturing, IVC9
price, VC3
transportation
logging, IVB4
marketing, VD

Poletimber
genetic production, IIIB
logging, IVB
marketing, VB3
price, VC2
regional sources, IB

Policy and politics
forestry at large, IC
land, IIC3

Pollution (see Environmental concern)

Post, IVC9
demand, VA
logging, IVB

manufacturing, IVC9
marketing, VB6
price, VC3
transportation
logging, IVB4
marketing, VD

Prediction (see Forecasting and forecast

Prescribed burning, IIID2

Preserve (see Reserve)

Price (see Valuation)
reporting, VC4

Procurement, VB
raw material
logging, IVB
manufacturing, IVC

Production
agent, II
general trend and prospect, VA
genetic, III
manufacturing, IV
principles, IA
regional resources, IB

Productivity
forest, IIIB2
labor, IIA3
logging, IVB
manufacturing, IVC
professional, subprofessional, IF

Profit
entrepreneurial, IIB
genetic production, IIIE
investment, IID1
manufacturing, IVA4
valuation, ID2

Program in forestry, IC

Projection (see Forecasting and forecast)

Protection, IIID

Pruning, IIIB4

Public interest, ID4
forestry at large, IC
land, IIC3

Public relations, ID6
policy, program, IC

Pulp and paper, IVC2
demand, VA
manufacturing, IVC2
marketing, VB5
price, VC3
transportation, VD

Pulpwood and chips
as raw material, IVC2c
(see also Utilization)
demand, VA
logging, IVB
marketing, VB5b
price, VC3
transportation
logging, IVB4
marketing, VD

Railroad (see Transportation)
tie (see Crosstie)

Rangeland, IIIA3
grazing fee, VC3
management, IIIA3
(see also Area)

Real estate, IIC
ownership, IIB
tax, ID1b

Recreation, IIIA5
fee, IIIA5d
integrated forestry, IIIA1
price, IIIA5i
(see also Wildlife)

Recruitment
labor, IIA1
professional, subprofessional, IF

Recycling (see Utilization)

Reforestation, IIIB3

Regeneration, IIIB3

Regional resources
manufacturing
industry at large, IVA
logging, IVB1
other forest industry, IVD
other manufacturing, IVC
(see also Area)

Regional science, IIC4

Regulation
forest practice legislation, IC
land use, IIC3
timber, IIB5

Removals
consumption-production relationship, VA
manufacturing, IV
regional resources, IB
(see also Harvest)

Requirements
long-term, VA2
short-term (see Regional resources)

Research, IE

Reserve
land use, IIC3
policy, IC
public, IIB2
recreation, IIIA5
regional, IB
wildlife, IIIA7

Residue
logging, IVB3
manufacturing, IVC

Retailer, V

Return (see Earnings)

Road (see Transportation)

Rosin (see Naval stores)

Rotation, IIIB5

Roundwood (see Stumpage and log)

Runoff
erosion, IIIA6
integrated forestry, IIIA1

Safety, IIA4
(see also Technology)

Salary
managerial, IIB
professional, subprofessional, IF

Salvage
damage, IIID
logging, IVB

Sap (see Maple product)

Sawlog, IVC1d
demand, VA
logging, IVB
marketing, VB3
price, VC2
transportation
logging, IVB4
marketing, VD

Sawmill, IVC1

Sawnwood (see Lumber)

Sawtimber
genetic production, IIIB
logging, IVB
marketing, VB3
price, VC2
regional resources, IB

Securities (see Capital)

Seed orchard, IIIB3

Seeding, IIIB3

Seller, VB
land, IIC3

Shelterbelt, IIIA6

Shipping (see Transportation)

Siltation
erosion, IIIA6
integrated forestry, IIIA1

Silviculture, III

Site quality, IIIB2

Skidding, IVB4

Sleeper (see Crosstie)

Small holding, IIB3c

Social interest, ID4
  forestry at large, IC
  land, IIC3

Sociology, IA

Soil, IIIA6
  integrated forestry, IIIA1
  site quality, IIIB2

South America (see Latin America)

Species
  tree, IIIB1

Sportsman, IIIA7
  (see also Recreation)

Squares (see Lumber)

State forest (see Forest)

Statistics
  finding (see Regional resources)
  method
    genetic production, IIIE
    land, IIC4

Stocking
  fish and game, IIIA7
  integrated forestry, IIIA1
  timber, IIIB5

Storm damage, IIID4

Stumpage and log
  demand, VA
  logging, IVB
  marketing, VB3
  price, VC2
  transportation
    logging, IVB4
    marketing, VD

Stump, IVD2
  (see also Harvest)

Substitute for wood, VA

Supply
  capital, IID2
  forest resources generally, IIA1
  forest and products generally, IB
  foreign trade, VB
  labor, IIA2
  land, IIC1
  log, IVB
  manufactured wood product, IVC
  marketing, VB
  nontimber forest resources IIIA
  Professional, subprofessional, IF
  timber, IIIB
  tree product, IVD

Sustained yield, IIIB5
  nontimber product, IIIA

Switchtie (see Crosstie)

Taiwan
  forestry at large, IB3
  manufacturing, IVA1c

Tapping (see Maple product)

Tariff, VB

Taungya System, IIIA1

Tax, ID1
  ad valorem property, ID1b
  assessment, ID2

Teaching
  labor, IIA3
  professional, subprofessional, IF

Technician, IF

Technology
consumption, VA3
genetic production, III
labor, IIA3
manufacturing, IV
marketing transportation, VD

Tenure (see Owner and ownership)

Thinning, IIIB4

Tie (see Crosstie)

Timber
genetic production, III
manufacturing, IV
regional resources, IB
(see also Stumpage and log)

Timbers (see Lumber)
mine (see Mine timber)

Trade, V

Trail, IIIC
(see also recreation)

Training
labor, IIA3
professional, subprofessional, IF

Transportation
forest management, IIIC
logging, IVB4
manufacturing, VD
marketing, VD

Tree
improvement, IIIB3
species, IIIB1

Trucking (see Transportation)

Turkey
forestry at large, IB3
manufacturing, IVA1c

Turnover, IIA4

Turpentine (see Naval stores)

Unemployment
labor, IIA1
professional, subprofessional, IF

Union of South Africa
forestry at large, IB4
manufacturing, IVA1d

Union, IIA2

United States
forestry at large, IB2
manufacturing, IVA1b

Urban forest (see Forest)

Urban forestry, IIIA8

USSR
forestry at large, IB3
manufacturing, IVA1c

Utilization
logging, IVB3
manufacturing, IVC

Valuation
damage, IIID
data, VC
land, IIC3
method, ID2
policy, program, IC
tax assessment, ID1
value syatem, ID4

Veneer and plywood, IVC3a
demand, VA
log, IVC3c
manufacturing, IVC3
marketing
cash, VB4
futures, VB2
price, VC3
transportation, VD

Vocational education
labor, IIA3
professional, subprofessional, IF

Volume (see Timber)

Wage and wage rate, IIA3

Wallboard (see Composition board)

Waste (see Utilization)

Water and watershed, IIIA6
integrated forestry, IIIA1

Weeding, IIIB4

Weight (see Timber)

Wholesaler, V

Wilderness, IIIA

Wildfire, IIID1

Wildlife, IIIA7
(see also Rangeland; Recreation)
damage by, IIID4

Wind damage, IIID4
soil erosion, IIIA6

Wood (see Timber)

Woodland (see Forest)

Woodlot, IIB3c

Woodpulp (see Pulp and paper)

Woods (see Forest)

Work, IIA1
professional, subprofessional, IF

Workmen's compensation, IIA4

Yarding, IVB4

Zoning, IIC3

Reference is to citation number. Citations 765-1110 appear in issue 54 (February 1981), 1111-1468 appear in issue 55 (June 1981), 1469-1752 appear in issue 56 (October 1981).

ACHMAD SUMITRO
910
ADDISON RAY B.
1326
ADEYOJU S. KOLADE
803
ADEYOJU S.K.
877
ADISOEMARTO SOENARTONO
1519
AGEE JAMES K.
1000
AGER B.
933
AHMED I.
911
AINSCOUGH GRANT L.
1172
AKKERMANS P.
1597
ALEKSEEV V.A.
1485
ALHÉRITIÈRE DOMINIQUE
823
ALIG RALPH J.
1357
ALIM A.
1276
ALLEN DAVID
1400
ALLEN STEWART
1308
ALLEYNE PATRICK
1268
ALONZO A.E.
878
ALUMA R.J.W.
1160
ALWARD GREGORY SCOTT
1591
AMES R.G.
1667
AMES RICHARD G.
1017
ANAGNOS N.
1038, 1109
ANDERSON WALTER C.
1430
ANDERSSON FOLKE
1486
ANDERSSON S.
1358
ANDRESEN J.W.
1018
ANDRESON J.W.
1329
ANGELO M.
1638
ANNE R.
1598
APSEY T. MICHAEL
1173
ARMSON K.A.
1117, 1174
ARNOLD M.
804
ARTHUR JEFFREY L.
1349
ASSIER-ANDRIEU L.
1527
AVRAM C.
1031
BAGNARESI U.
1487
BAKER ROBERT
842
BALABANIAN O.
1488
BALTHAZARD MARK
1400
BANCROFT C.
988
BANDO TADAAKI
1037
BANKS WARREN E.
1557
BANZHAF GEORGE L.
840
BARE B.BRUCE
1561
BARKER PHILIP A.
1330
BARRETT MICHAEL K.
769
BARROS OSCAR
1249
BARTELHEIMER P.
1497
BARTELHEIMER PETER
1457
BARTOLOME JAMES W.
1637
BARTON I.L.
1512
BARY-LENGER A.
1111
BAUER E.
1129, 1710

BAUR GEORGE N.
1203
BAYLISS MARTIN
1069, 1070, 1071, 1716
BEASLEY J.L.
774
BEATTY RUSSELL A.
1668
BEAUFAIT WILLIAM R.
1213
BEDLINSKII S.V.
1489
BELL ENOCH F.
1054
BELLAMY THOMAS R.
1382, 1722
BENEDICT JAMES M.
1007
BENNETT CHARLES F.
1414
BENTICK B.L.
1190
BENTLEY WILLIAM R.
1250
BERGER E.P.
951
BERGSTROM DOROTHY
968
BERRIER DEBORAH L.
1658
BERTELSON DANIEL F.
1700
BERTIER P.
1601
BEUTER J.H.
1039
BHRUKSASRI W.
969
BIESTERFELDT ROBERT
1181
BIGNELL A.W.
998
BILEK EDWARD M.
1375
BILLETOFT BIRGITTE
956
BINDERNAGEL J.A.
1625
BINKLEY CLARK S.
1350, 1528
BINKLEY CLARK SHEPARD
1604
BIRCH THOMAS W.
1246, 1599
BITTIG B.
1175
BITTIG BERNHARD
1359
BLACK HUGH JR.
1665
BLAHNA DALE
1005
BLAKE GEORGE M.
1213
BLANKENTHORN P.R.
1431
BLOCH G.W.
1236
BLUDOVSKÝ Z.
778, 1626
BLYTH JAMES E.
1076, 1077, 1079, 1376, 1405
BOADO E.L.
861
BOCHKOV I.M.
1673
BOELTER ALLEN H.
1376, 1553
BOHNING R.A.
1058
BOISSIÈRE J.
1571
BOLDUE PIERRE
1374
BOLSINGER CHARLES L.
1473
BOND F.L.
824
BONES JAMES T.
1076, 1406, 1407, 1415, 1713
BONC WON AHN
950
BOONKIRD S.A.
970
BOOTH HARRY
1723
BOSON SYLVANDER R.
805
BOSSHARD W.
1112, 1176
BOSTRAND L.
862
BOURGENOT L.
850
BOWERS JOHN R.
1122
BOWERSOX T.W.
1431

BOWES MICHAEL D.
1277
BOYCE STEPHEN G.
971, 1080, 1252, 1278, 1416, 1627
BOYER WILLIAM D.
1690
BOZON M.
1663
BRABAENDER H.D.
1253, 1254
BRABÄNDER H.D.
1605
BRADLEY DENNIS P.
1081
BRAMBLF W.C.
972
BRANDENBERG M.
1274
BRANION RICHARD
1399
BRAZIER J.D.
1334
BREAG C.R.
1083
BRISSAC E. DE
952
BRODIE J. DOUGLAS
1050
BROKENSHA D.
1731
BROOKMAN-AMISSAH J.
973
BROSSELIN A.
1490
BROWN A.
1067, 1408
BROWN JANE B.
1417
BROWN PERRY J.
1001, 1298
BROWN SANDRA
1585
BRUNS DONALD H.
1298
BUCHANAN N.W.
863
BUCKNER EDWARD
1214
BUDOWSKI G.
974
BUHYOFF G.J.
1013
BUHYOFF GREGORY J.
1010, 1641
BUONGIORNO JOSEPH
1161, 1162, 1360, 1398, 1452, 1460, 1628, 1721
BURLEY J.
1584
BURLEY JEFFERY
1726
BUSE BERND
1418
BUSH F.A. TER
1090
BUTTOUD G.
1600
BUTTS PAUL M.
770
BYERS A.C. III
1163
BYINGTON E.K.
1296
BYRON R.N.
1453, 1737
CALLAHAM R.Z.
864
CAMOUS CHRISTIAN
1106, 1110
CAMPBELL JOHN
1471
CAMPBELL RICHARD
1177
CAMPBELL WILLIAM A.
770
CAMPOS ROMERO R.
934
CAPP JOHN C.
1665
CAPPELLI M.
898
CARCEA F.
1031
CARLISLE A.
1227
CARNEIRO C.M.
817
CAROTHERS J.E.
935
CARPENTER EUGENE M.
1081, 1419
CARROLL JEANNE
1745
CARRON L.T.
1529
CARTER T. HEYWARD JR.
1554
CASTAÑOS M.L.J.
879

CASTILLO E.
865
CASTILLO R.A. DEL
1578
CASTRO A.P.
1731
CASU P.
1032
CECELSKI E.
1082
CHAMBOREDON J.C.
1663
CHANG SUN JOSEPH
1279, 1628
CHAPMAN ROGER C.
771
CHAPMAN W.A.
925
CHARBONNEAU J. JOHN
1016
CHASE RICHARD A.
1355
CHATTERJEE N.
825
CHAUSSIN E.
1606
CHAW-MING CHEN
1297, 1302
CHEYNEL P.
1551, 1555, 1556
CHIANG KAO
1346
CHILD R.D.
1296
CHILIMOV A.I.
959
CHITTENDEN A.E.
1083
CHO EUNG HYOUK
1255
CHOPP MICHAEL E.
1251
CHRISTENSEN B.
975
CHRISTODOULOU A.
1100
CHUNG D.H.
1748
CIBULA E.J.
1671
CISNEROS BUENO P.J. DE
1089
CLARK F. BRYAN
1130
CLARK G.C.
1579
CLARK ROGER N.
1643
CLEMENT J.
806
CLEPHANE THOMAS P.
1075, 1745
CLERC F.
1530
CLOKE PAUL J.
1644
COLE GENE F.
1629
COLEMAN DEREK J.
1280
COLLETTI JOE P.
1398
COMOLLI PAUL M.
1469
COMTE M.C.
1635
CONDRELL WILLIAM K.
849, 1193
CONKLIN JOHN B.
838
CONNAUGHTON KENT P.
1311
CONSIDINE THOMAS J. JR.
1474
CONTESSE GONZALEZ J.
1178
CONTRERAS A.
1533, 1534, 1535
CONTRERAS ARNOLDO H.
1095
CONVERY FRANK J.
1617
COOPER R.
890
COOPER R.J.
1225
CORDELL H. KEN
1019, 1269
CORTNER HANNA J.
1241, 1531
COST N.D.
1689
COTTERELL CALVIN C.
1304
COUFAL JAMES E.
1215
COWLING E.B.
1689

COZZO D.
807, 912
CROMER R.N.
1033
CROSSEN T.I.
1645
CUBBAGE FREDERICK W.
1180
CUEVA GARCÍA L. DE LA
1386
CUMER A.
779
CUMMING D.G.
1281
CURTIS A.B. JR.
1420
DAMALAS G.
1049
DANIEL TERRY C.
1656
DAR-HSIUNG WANG
1372
DARGAVEL JOHN
1179
DARGRAVEL J.B.
1033
DARR DAVID R.
1725
DAVAR ZAL
1681
DAY ROBERT D. JR.
840
DE MONTGOLFIER J.
1601
DEADMAN H.
866
DEARDEN PHILIP
1318, 1654
DECOSTER LESTER A.
1118
DECOURT N.
1020
DELMENDO M.N.
975
DEMARD J.C.
1704
DENIZET A.
1691
DENNIS DONALD F.
1256, 1599
DEPPE H.J.
1412
DEVEAUX M.
1602
DEVILLE J.
1164
DICKERMAN M.B.
1130
DICKSON A.
851
DINDESKÝ VILIAM
1044
DINE N.W.
936
DISSESCU R.
1031
DOLGOR N.
1485
DONIS C.
808
DONNELLY DENNIS M.
1715
DORAN A.
1621
DOSSO HENRI
1515
DOUGLASS B.S.
1090
DOWDLE BARNEY
843
DRESS PETER E.
1351
DRIVER B.L.
1298, 1299, 1669
DROSTE BERND VON
1421
DU SAUSSAY CHRISTIAN
1646
DUBOURDIEU J.
1630
DUCERF J.
1068
DUERR WILLIAM A.
1470
DUMMEL K.
1586
DUNCAN DONALD P.
1130, 1216
DUNKERLEY J.
1082
DUSTIN DANIEL L.
1313, 1650
DUTROW GEORGE F.
1034, 1265
DWYER JOHN F.
1303
DYKSTRA DENNIS P.
1349

ECHELBERGER HERBERT E.
1014
ECKELMAN CARL A.
1411
EDWARDSON T.E.
955
EGGER J.
780
EHMER O.W.
1072
EID JOHN
1622
EISENHAUER G.
1217, 1218, 1236
EISENMAN ERIC
1361
EK ALAN R.
1187
ELEFTERIADIS N.
1320
ELIZAROV A.F.
1131
ELLEFSON PAUL V.
1180, 1251, 1375, 1377
ELLIS THOMAS H.
1475
ELLISOR JIM
1711
ELOVIRTA P.
913
ELVERFELDT A. FREIHERR VON
854
ENABOR E.E.
914
ENANDER K.G.
1219
ERICSON O.
1358
ESKELINEN OSSI
1639
ESTÈVE J.
1062
EVANS CRAIG
1014
EVRARD R.
1111
FABIANI J.L.
1663
FAEHSER L.
1513
FAEHSER LUTZ
1165
FAIRFAX S.K.
867
FAIRFAX SALLY K.
1636
FAJARDO J.F.P.
967
FARRAR ROBERT M.
1690
FEGE ANNE S.
1412
FELT DOROTHY G.
769, 1119, 1120, 1476
FEOFILOV V.A.
1145
FERGUSON I.S.
880
FERGUSON KAREN
1696
FEUCHTER ROY W.
1282
FIBIGER W.
937
FICKEN R.E.
1701
FICKLE JAMES E.
1390
FIELD DAVID B.
1121
FIELD RICHARD C.
1351
FIGHT ROGER D.
976, 1661
FISCHER D.
1257
FISCHER F.
881
FISHER CLIFFORD D.
840
FIX W.L.
972
FLICK WARREN A.
1122
FLORENTIN G.
1132
FLOWERS WILLARD R. JR.
1351
FODGAARD S.
1491
FODOR PAUL A.
1657
FOGG P.J.
938
FONTAINE R.G.
1040
FORSTER R.B.
1222

FOX BRUCE EDWARD
1594
FRANCES R.
922
FRANCIS G.J.
781
FRANČIŠKOVIĆ S.
782
FRANKLIN E. C.
1258
FREEMAN JAMES E.
1200
FRENCH J.R.J.
1021
FREY U.
1231
FRIEDMAN JANET
1199
FRIEND GORDON R.
1631
FRISK T.
915
FRISSE E.
1335
FROEHLICHER R.
1565
FRUHAUF C.
1492
FUKAO SEIZO
783
GAC A.
1423
GAFFNEY MASON
839
GALLAGHER G.J.
784
GALLEGO BLAZQUEQ L.A.
882
GALLEGOS CARL M.
1130
GALLY J.
1055
GAMBLE HAYS B.
1309
GAMMIE J.I.
1472
GAMSER M.
1731
GANGULI B.N.
962
GANSNER DAVID A.
1259, 1750
GARCÍA ALVAREZ A.
989
GARG I.P.
883
GARLAND S.B.
1709
GARRIER G.
1493
GATHY P.
1111
GATHY PIERRE
1283
GAVIRIA G.G.
967
GEHLHAUSEN RANDY J.
1260
GELLAR SHELDON
1566
GENSSLER H.
1494
GHOSH R.C.
899, 1424
GIBSON ROB
1181
GILLESS JAMES K.
1460, 1721
GILLILAND JOHN
1336
GIORDANO G.
1097
GITTINS D.
1192
GODFREY E. BRUCE
1054
GOETZ V.
1532
GONZÁLEZ J.F.
809
GONZALEZ R.
1166
GOODWIN J.
926
GÖTSCH H.
1182
GOULD NORMAN E.
1664
GOULET DANIEL V.
1064
GRAINGER ALAN
1495, 1516
GRAMMEL R.
916
GRAVES PAUL F.
840
GREGERSEN H.M.
884

GREGERSEN HANS M.
1187
GREGERSON H.
1533, 1534, 1535
GREIG P.J.
802, 977
GREIWE RICHARD J.
1200
GRELEN H.E.
1296
GRIEDER E.P.
1231
GRIFFIN D.M.
868
GROES N.
1105
GROSHENS M.C.
1567
GROSHEV V.L.
1468
GUESS GEORGE M.
1223
GUILLARD J.
953, 1133, 1572
GUILLAUMET JEAN LOUIS
1515
GULÇUR M.
1517
GULDIN RICHARD W.
1002, 1310, 1647
GULDIN RICHARD WILLIAM
1648
GUNATILLEKE C.V.S.
900
GUNDERMANN E.
1684, 1692
GUSTAFSSON KARL-FREDRIK
1747
GUYOT F.
1734
HAAS GLENN E.
1001
HAAS LEONARD
1716
HABER W.
1284
HACKETT RONALD L.
776
HADLEY MALCOLM
1515
HAEBERLE S.
1395
HAGENSTEIN P.R.
1541
HAHN JEROLD T.
772, 1081
HAIR DWIGHT
1026
HALE P.N. JR.
935
HALEY DAVID
1107
HAMZA H.
901
HAMZA HECHMI
1425
HANEY HARRY L. JR.
1558
HANN DAVID W.
1050, 1693
HANSEN TORSTEN
1337
HANSON A.G.
1454
HAROU PATRICE
1285
HAROU PATRICE A.
1183, 1603
HART CYRIL
1191
HARTGRAVES CHARLES R.
1240
HASSAN A.E.
869
HAYGREEN J.G.
1084
HECKEMANN H.
1338
HEDLUND
1127
HEGG KARL M.
1123
HEIKINHEIMO M.
870
HEINEMANN G.L.
1341
HEINRICH R.
780, 917, 931, 1065
HELLES F.
978, 1491
HELLES FINN
1194
HELLMAN L.
939
HELLMAN O.
1694
HENNE AUGUST
1362

HERLOCKER D.
826
HERRERA RAFAEL
1518
HERRICK OWEN W.
1259, 1687, 1750
HEUZÉ G.
1705
HEVIN H.
1447
HEYTZE J.C.
990, 997
HICKMAN CLIFFORD A.
1260
HILMI H.A.
917
HODAPP W.
1254
HOEFLE HANNS H.
1339
HOFSTAD O.
979
HOGANSON HOWARD
1187
HOLMES G.D.
855
HOLMES W.D.
1607, 1608, 1609, 1610
HOLMES WILLIAM H.
840
HOOVER WILIAM L.
1411
HOPKINS E.R.
1363
HORDIJK P.
1270
HORGAN G.P.
1512
HOUGHTALING T.W.
884
HOWARD T.
1124
HOYOS G.B.
827
HROMADA E.
785
HRUBES ROBERT J.
1311
HSIUNG WEN-YUE
1134
HUETTERMANN A.
1220
HUGENTOBLER C.
1245
HUGUET LOUIS
786
HULTMAN S.
1022
HUMMEL F.C.
828, 991
HURLEY JANET F.
1665
HUSCH B.
765, 980
HUTCHINS CECIL C. JR.
1722, 1751
HUTTUNEN T.
1714, 1736
HYDE WILLIAM F.
1027
IFF RONALD H.
1064
IRLAND L.C.
1124
IRLAND LLOYD C.
1048, 1300
IRONS PAULA
1400
ISAEV A.S.
1354
JAATINEN ESKO L.
1085
JACKSON B.
1731
JACKSON BEN DOUGLAS
1741
JACOBI W.R.
1689
JAESCHKE H.G.
787
JAKES PAMELA J.
947, 1477, 1478, 1484
JÄRVELÄINEN V.P.
885
JÄRVELÄINEN VELI-PEKKA
1611
JENNINGS K.S.
1623
JENNINGS PENELOPE
1426
JENSEN MARVIN O.
1649
JENSSEN SALAZAR J.E.
1057
JESSOP D.S.
902
JOHANN K.
1347

JOHNSON FREDERIC D.
1134
JOHNSON RONALS N.
1744
JOHNSTON D.R.
1573
JOKERST RONALD W.
1411
JOLAS T.
1496
JONES A.R.C.
1023, 1615
JONES J. GREG
1619
JONES PAUL H.
1450
JONES ROY S.
1304
JORDAN CARL F.
1518
JORDAN ROBERT D.
1550
JØRGENSEN A.A. WALTER
1491
JOSEPH D.K.
1448
JOSEPH J.
1124
JU-YUAN LIU
1319
KAIRIUKSTIS L.A.
960
KAISER H. FRED
1265, 1624, 1662
KAIYA T.
852
KALLIO EDWIN
1098
KAMMERLANDER H.
1632
KANTOLA M.
924
KAPLAN RACHEL
1670
KARAIM B.W.
1058
KARSCHON R.
1286
KARTAWINATA KUSWATA
1427, 1519
KATŐ F.
956, 1612
KAUL O.N.
1287
KAURINKOSKI S.
870
KEIPI K.
1030
KEIPI KARI
1208
KEMP R.H.
1451
KENNY-JORDAN C.B.
927
KENT JAMES A.
1200
KERMANI W.A.
1288
KERNAN H.S.
1568
KEUFFEL W.
1364
KHANBEKOV R.I.
1331
KILPATRICK D.J.
788
KIM DONG CHUN
1198
KIM JANG SOO
1449
KING K.F.S.
961, 1224, 1289, 1580
KINGSLEY NEAL P.
1246, 1613
KINGSTON E.
810
KIRKLAND A.
903
KLEMPERER W. DAVID
844, 1641
KLINGE HANS
1518
KNIGHT HERB
1677
KNIGHT HERBERT A.
1479
KOCH N. ELERS
1305
KOCHENDERFER J.N.
1066
KOÉBELÉ F.
992
KOENIGSHOF GERALD A.
1410
KOESTER U.
1254
KOGER JERRY L.
1396

KOHTARI K.
981
KOKKINIDIS G.
1365
KONOHIRA YUKICHI
1352
KORPEL ŠTEFAN
1135
KOSCO BARBARA H.
1637
KROESCHELL K.
1532
KROTH W.
1204, 1497
KUFAKWANDI SIMONA F.
1290
KURTH H.
1271
KURTZ WILLIAM B.
1357, 1614
KUTSCHER G.
1195
KUULUVAINEN J.
798
KUUSELA K.
789
LAAKKONEN O.
1030
LANCASTER KENNETH F.
1428
LANLY J.P.
766
LANSIGAN N.P.
940
LAPAGE WILBUR F.
993
LARSON G.B.
864
LARSON L. KEVILLE
840
LEAK WILLIAM B.
1348
LEE PHIL WOO
1383, 1455
LEE R.G.
886
LEGG MICHAEL H.
1269
LEIBUNDGUT H.
1113
LELAND ROBERT C.
845
LEMASTER DENNIS C.
771
LENNARTZ M.R.
982
LENZ R.
1205
LEONARD RAYMOND E.
1014
LEPITRE C.
1062
LEU M.T.
1748
LEWIS BERNARD J.
1614
LEWIS C.E.
1296
LEWIS GORDON D.
1209
LEY CH.
1595
LIBECAP GARY D.
1744
LIH-CHIN CHEN
1372
LII YUH-MING
1642
LINDELL GARY R.
1102
LITTON R. BURTON JR.
1011, 1332
LIVINGSTONE J.M.
966
LO S.L.
957
LOHMANN U.
1373
LÖNNSTEDT L.
834, 1041
LOOMIS JOHN B.
1312
LOTHNER DAVID C.
1696
LOWE KENNETH
1073
LUCAS R. C.
995
LUCAS ROBERT C.
1003, 1660
LUGO ARIEL E.
1585
LUNA LUGO A.
811
LUSCOMBE K.
1456
LYONS JAMES R.
1016

MACCLEERY DOUGLAS
1184
MACE ARNETT C. JR.
1475
MACHADO E. DE F.
1004
MACKLIN C.J.
1738
MADIGAN G.
1615
MAGILL ARTHUR W.
1017
MAIR A.
779
MAKINEN H.
918
MANN G.
1158
MANNING G.H.
1738
MANNING TRAVIS W.
1323
MANTAU U.
1261
MARCHETTA JOANNE S.
1662
MARDON JASPER
1399
MARGARIS N.S.
1429
MARION J.E.
887
MARKO V.
790
MARTIN THOMAS T.
1391
MASCHIMENTO V.R.
812
MASSEY J.G.
1431
MASSEY JOSEPH G.
1430
MATER J.
888
MATSUI MITSUMA
791, 856
MATTSON JAMES A.
1081
MAYER HANNES
1340
MCARTHUR LAURENCE BARRETT
1581
MCAVOY LEO H.
1313, 1650
MCCLURE JOE P.
1480, 1574
MCCOLLUM MICHAEL P.
1430
MCCONNELL CHARLES
1298
MCDERMID R.W.
938
MCDONALD PHILIP M.
1011
MCGAUGHEY STEPHEN E.
1185
MCKEE GREGG L. JR.
1101
MCKEEVER DAVID B.
1413
MCKENZIE W.M.
1021
MCLELLAN ROBERT W.
1269
MCSWAIN GEORGE A.
1724
MEDINA ERNESTO
1518
MEGAHAN WALTER F.
1629
MEIJER WILLEM
813
MEIS SCOTT
1306
MELE A.
829
MÉO J.
1706
MERGEN F.
983
MERINO CUEVAS R.
1314
MERZ K.
1072
MICHA F.R.
1024
MICHIE BRUCE R.
1360
MIEGROET M. VAN
1291, 1498
MIES WILL
1400
MIES WILLARD E.
1074
MILESCU I.
1031
MILLER K.R.
904

MILLS THOMAS J.
1045, 1357
MLINSEK D.
905
MOELLER GEORGE H.
1210, 1282
MOHAMED ALLAOUI
889
MOHAPATRA C.R.
948
MOISEEV N.A.
830
MONAHAN RALPH T.
1086
MOORE D.
1525
MOORE W.D.
943
MORANDINI R.
1575
MORE THOMAS A.
1307, 1321
MORLEY PETER
1136
MORONNE DAINA DRAVNIEKS
1333
MORSE ERIC
1228
MORY P.
1499
MOSES THOMAS CLIFFORD
1702
MOTT D. GORDON
1356
MOULIN A.
1536
MUÑOZ DAZA V.M.
954
MURPHEY W.K.
1431
MURPHY B.D.
998
MUSSER LLOYD A.
1228
MUTHOO M.K.
1035
MYERS NORMAN
814, 1167, 1267
NAKASHIMA Y.
928
NAMKOONG G.
1584
NAVON DANIEL I.
1366
NAYUDAMMA Y.
1092
NELSON CHRIS JR.
1548
NEVEL ROBERT L. JR.
1407, 1703
NEWPORT CARL A.
840
NICKELS A.
1078
NICOLÁS ISASA J.J.
994
NIESSLEIN E.
831, 832, 1201, 1620
NILES J.J.
1432
NILSON H.E.
792
NILSSON S.
919
NOEL G.
1739
NORDIN VIDAR J.
1374
NORMANDIN D.
1091
NOVOGORODOVA T.I.
1063
NYYSSÖNEN A.
793
OEDEKOVEN KARL
1262
OFFICER DENNIS T.
1557
OFOMATA G.E.K.
1229
OGDEN GERALD RUPERT
1537
OHASHI KUNIO
963
OHGANE E.
1500
OHLSSON B.
891
OJA S.
1211
OJO G.J. AFOLABI
1433
OKIGBO BEDE N.
1292
OLEMBO R.J.
906
OLIVER PETER
1746

OLSON SCOTT C.
1558
OLTREMARI J.
1651
OLTREMARI JUAN V.
1009
ONDRO W.J.
1058
OPENSHAW K.
1051
ORMAZABAL PAGLIOTTI C.
1387
ORSINI-ROSENBERG H.
1028
ORTUÑO MEDINA F.
994
OSTROM ARNOLD J.
773
OSWALD DANIEL D.
1481
OVEREND R.P.
1434
OVINGTON J. DERRICK
1435
O'BRIEN D.
1678
O'BRIEN DAVID
1467
O'LEARY JOSEPH T.
1005
PAAVILA H.D.
1727
PACHER J.
1137, 1501
PAILLE G.
1482
PALO M.S.
1168
PALOSUO V.J.
870
PAMPE J.
1247
PANT M.M.
815, 816, 1520
PAPÁNEK FRANTIŠEK
1521, 1640
PAPASTAVROU A.
1038, 1393
PARDÉ J.
1502
PAREDES G.
1651
PARK CHRIS C.
1644
PARK MYEONG KYU
794, 1263, 1401
PARK TAE SIK
1264
PARRY BRIAN THOMAS
1592
PARSONS DAVID J.
1657
PASS WILLIAM A.
1101
PATALAS Z.
1232
PATAT C.
1559
PEARSON H.A.
1296
PEH T.B.
1388
PEINE JOHN
1005
PELCNER JÚLIUS
1752
PELFORT BATALLA J.
795
PELLICO NETTO S.
817
PELT VAN J.
1655
PEÑA A.
865
PENISTAN M.J.
796
PENNETIER CL.
1588
PERSSON R.
767
PETERSON R.M.
774
PHELPS ROBERT B.
1096, 1672
PHILLIPS DOUGLAS R.
1436
PHILLIPS F.H.
1709
PHILLIPS J.C.L.
1679
PICORNELL P.M.
929
PINGAUD M.C.
1593
PLAGER ANNA
1322
PLESCHBERGER WERNER
1538

PLOCHMANN R.
1204
PLOCHMANN RICHARD
1503
POBEDINSKIĬ A.V.
833
POLENO Z.
1562
POLLANSCHUETZ J.
1347
POLLITZER STEPHANIE
1404
POLOZHENTSEV I.P.
1674
PONTECORVI F.
1730
PORTERFIELD R.L.
1042
POU ROSARIO
1171
POWELL DOUGLAS S.
1474
PRAKOSO S.H.
1522
PRATESI F.
907
PRINDLE ALLEN M.
1196
PRINGLE S.L.
1103
PRIVAL M.
1707
PUURI CARL R.
1221
PUWEIN W.
1138
PYNE STEPHEN J.
1685
RÄDSTRÖM L.
1367
RAMDIAL BAL
1206
RAMSAY W.
1082
RANDALL ROBERT M.
976
RANDERS J.
834
RAO C.K.
1092
RAUTER R.M.
871
RAWLING K.L.
984
REDETT ROBERT B.
1703
REED F.L.C.
1434
REID SUSAN
1716
REY MARK
835
REYNOLDS I.K.
985
REYNOLDS RUSSELL ROY
1125
RICH STUART U.
1462
RICHARDSON S.D.
964
RICKART THOMAS M.
1186
RIEDACKER A.
1437
RIIHINEN P.
885
RIIHINEN PÄIVIÖ
1549
RILEY B.
1731
RINAUDO Y.
1504
RIS H.
1207
RISWAN SOEDARSONO
1519
RIVAILLON P.
1695
ROCHE L.
890, 1225
ROCHE M.T.
1541
ROCHOT A.
1740
ROGGENBUCK JOSEPH W.
1652, 1658
ROMM JEFF
857, 1523, 1539
ROSE DIETMAR
1696
ROSE DIETMAR W.
1187
ROSENTHAL DONALD
1669
ROSS ELDON W.
1616
ROSS LESTER STUART
1540

ROUTLEY RICHARD
1524
ROUTLEY VAL
1524
ROW CLARK
1624
ROYER JACK P.
1617
ROZSNYAY Z.
872
RUDERMAN FLORENCE K.
1378, 1379, 1380, 1381
RUNYON K.L.
1681
RUPRICH J.
930
RUPRICH JIŘÍ
965
RYABCHINSKIĬ A.E.
1674
RYAN JOHN J.
1200
RYMER L.
1139
SAADALLAH J.
1093
SACHTLER M.
1169
SAEMAN J.F.
1084
SAGL WOLFGANG
1114
SAHEL WELES
1094
SAINZ SANGUINO L.
920
SAKKAS G.
1233, 1273
SAKKAS G.A.
797
SALWASSER HAL
1665
SANCHEZ PALOMARES P.
920
SANDAHL L.
891
SANDERMANN W.
1389
SANDOR J.A.
1115
SANDOR JOHN A.
1272
SANTAPPA M.
1092
SARAVIA F.
873
SASSAMAN ROBERT W.
1228, 1230, 1311
SAVILL P.S.
788
SCHABEL HANS G.
1025
SCHALLAU C.
1039
SCHALLAU C.H.
1368
SCHALLAU CON H
1226
SCHEIFELE M.
1140, 1141
SCHEIRING H.
1632
SCHLEGEL
1651
SCHLESSMANN H.
1659
SCHMITHÜSEN FRANZ
836
SCHOEPFER W.
1586
SCHRAFT D.
1731
SCHREYER RICHARD
1652
SCHROEDER HERBERT
1656
SCHUERHOLZ G.
1158
SCHULER ALBERT T.
1294
SCHUSTER ERVIN G.
1054
SCHWARZBART GIDEON
1369
SCHWEITZER DENNIS L.
1241, 1531
SEDELMAIER K.
1138
SEDJO ROGER A.
1104, 1461, 1742
SELBY J. ASHLEY
1142, 1342
SEPPÄLÄ H.
798
SEPPÄLÄ R.
798
SESSIONS JOHN
1624

SETH V.K.
944, 1438
SEVRIN R.
1499
SHAFER E.L.
1012
SHAFER ELWOOD L.
1210
SHAH S.S.
892
SHANDS W.E.
1541
SHANNON MARGARET A.
1202
SHECHTER M.
995
SHECHTER MORDECHAI
1660
SHEFFIELD R.M.
1677
SHEFFIELD RAYMOND M.
1126, 1483
SHEIKH MAHMOOD IQBAL
1293
SHINOHARA TAKEO
1046
SHOARD M.
1505
SHOFNER JERRELL H.
1237
SICKLE C.C. VAN
775
SIEGEL WILLIAM C.
840, 1558, 1560
SIEVERDING HAROLD
1123
SILVERSIDES C.R.
945, 1434, 1728
SIMS DANIEL H.
1343
SINCLAIR STEVEN A.
1467
SINDEN J.A.
908, 985
SINGH ASHBINDU
1729
SINGH K.D.
818
SINGHAPANT S.
1006
SINITSYN S.G.
1682
SINNER K.F.
1143
SIROIS DONALD L.
1064
SLÁMA O.
1589
SLEE M.U.
874
SMITH B.N.P.
998
SMITH KENNETH E.
1446
SMITH NIGEL
1439
SMITH W. BRAD
772, 1077, 1405
SMITH J.H.
1067, 1408
SOARES BARRETO L.
1697
SOEKIMAN ATMOSOEDARYO
893
SOKOLOVA E.G.
1673
SOLANDT O.M.
858
SOMMERS HELEN
846
SORG J.P.
1170
SOSA CEDILLC V.E.
819
SOUTH P.M.
921, 1525
SOYEZ D.
909
SPEARS J.S.
768
SPEARS JOHN S.
1275
SPEER JULIUS
1457
SPEICH A.P.
1596
SPEIDEL G.
1144, 1576
SPEIDEL GERHARD
1212
SPELTER HENRY
1108
SPENCER EDWARD L.
1014
SPENCER JOHN S. JR.
1484
SPURR STEPHEN H.
1542

SRIVASTAVA B.P.
894
STADELMAN R.C.
1099
STAHL D.
1327
STAMOU N.
1100, 1109
STANKEY GEORGE H.
1643
STASULAT J.J.
875
STEELE R.C.
1440
STEINLIN H.
1116
STEMBURGER T.
1138
STEPHENS JOHN J.
841
STEUER RALPH E.
1294
STEVENS JAMES F.
1587
STEVENSON G.R.
1058
STEWART P.J.
853, 1036
STEWART PETER C.
1735
STIER JEFFREY C.
1397, 1721
STOHLGREN THOMAS J.
1657
STONE ROBERT N.
1096, 1724
STOTTLEMYER J. ROBERT
1242
STRONG DOUGLAS H.
1653
STUART THOMAS W.
1361
STUBBLEFIELD TED C.
1666
SUTHERLAND CHARLES F.
1560
SUTHERLAND CHARLES F. JR.
1197
SWAMINATHAN M.S.
1526
TAGA LEONORE SHEVER
1506
TANAKA SHIGERU
1618
TANTON B.
922
TAYLOR GEORGE F.
820
TEDDER P.L.
1353
TEDDER PHILIP L.
1197
TENNY PIETER A.
1460
THIELGES BART A.
1370
THOMMEN F.
1238
THOMPSON EARL G.
1550
THOMPSON RICHARD P.
1619
THOMSON JAMES T.
1569
THOR E.P. JR.
966
THOR EDWARD C.
1361
TIKKANEN ILPO
1543, 1544
TIWARI K.P.
944
TODD J.D.
1607, 1608, 1609, 1610
TOMÁS J. GONZALO FERNÁNDEZ
1582
TOMIMURA S.
1502
TÓTH S.
986
TOURÉ G.
821
TRAIMOND B.
1686
TRAN VAN NAO
987
TRENCHI PETER III
1122
TRZESNIOWSKI A.
931, 941
TSAREGRADSKAYA S. YU
1331
TSEKHMISTRENKO A.F.
1145
TUNÁK ŠTEFAN
1712
TURKEWITSCH I. W.
1563

TURNER BRIAN J.
1351
TWOMBLY ASA D.
1213
UEDA MICHIHIKO
1725
UTSCHIK H.
1328
UUSITALO M.
799
VACHULA PAVEL
1394
VACLAV VLADIMIR
1052
VALEIX J.
1132
VAN HEES WILLEM
1127
VAN WAGTENDONK JAN W.
1007
VARMAH J.C.
822, 932
VASIEVICH J. MICHAEL
1265, 1680
VASILEVSKY ALEXANDER
776, 947
VAYDA ANDREW
1519
VEEMAN TERRENCE S.
1323
VEKSHEGONOV V. YA
1015
VELDHUYZEN C.J.
951
VERDIER Y.
1570
VERHEGGEN J.F.
1498
VESIKALLIO H.
1146
VIGIER PH.
1507
VINOKUROV A.A.
1147
VOGEL P.
1248
VON GADOW K.
1683
VORONTSOV A.I.
1354
VOŠKO MILAN
1053
VUOKILA YRJÖ
1508
WAGAR J. ALAN
1315
WAGGENER T.R.
1043
WAHLROOS BJÖRN
1708
WALL PAUL
999
WALLACE ARTHUR
1717
WARDLE P.A.
1730
WAREING K.J.
1301
WARTLUFT JEFFREY L.
1086
WASHBURNE RANDEL
999
WEAD JAMES K.
1552
WEATHERHEAD DONALD J.
771
WEBB W.E.
1392
WEETMAN G.F.
1371
WEIDHAAS JOHN A. JR.
1688
WEINMANN RAYMOND G.
1221
WEINTRAUB ANDRES
1249
WEISSMAN G.
1088
WELCH RICHARD L.
1382
WELLBURN G.V.
942
WELLMAN J. DOUGLAS
1010
WELLMAN J.D.
1013
WEN-LIANG LIN
1372
WENDEL G.W.
1066
WENGERT EUGENE M.
1715
WENSEL LEE C.
1361
WEST P.C.
895
WESTOBY J.C.
896

WEYREUTHER F.
1188
WHARTON ERIC H.
1713
WHIPPLE JAMES H.
1376
WHITE EDWIN H.
1171
WHITE K.J.
859, 860
WHITE ZEBULON W.
847
WIĘCKO E.
897, 1509
WIENER ALFRED A.
1564
WIESNER E.
837
WILHELM STEVEN
1079, 1376
WILLIAMS STEPHEN B.
1641
WILLSON REGAN B.
1351
WILSON A.F.
1458
WILSON L.A.
1159
WILSON ROBERT H.
1391
WINKLER W.
1532
WINSAUER SHARON A.
1081
WINTERS ROBERT K.
949
WIRTH M.E.
1368
WISE PETER K.
1441
WISEMAN A. CLARK
1461, 1742
WITTE L.
867
WOLF C.W.
923
WOLF ROBERT E.
1128
WOMBLE PETER
1322
WONG W.C.
1388
WOOD DENNIS H.
1731
WRIGHT J.P.
1514
WU S.C.
1748
WUNSCH JAMES S.
1675
WUTZ A.
1235
WYNN GRAEME
946
YACUBSON D.
876
YADAV RAM P.
1442
YASU KINJI
1402
YATES RICHARD C.
848
YOCUM J.
869
YON SUDIONO
910
YONG-CHI YANG
1372
YOUNG HAROLD E.
1087
YOUNG R.A.
958
YOUNGQUIST JOHN A.
1411
YOUNGS R.L.
1577
ZAVITKOVSKI J.
1696
ZEHETMAYR J.W.L.
1148, 1510
ŽIHLAVNÍK J.
1061
ZOLOTOV S.A.
1674
ZUNDEL R.
996, 1266, 1545